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OFFICIAL PUBLICATION OF
THE ASSOCIATION OF AMERICAN MEDICAL COLLEGES

FEBRUARY 1959 • VOLUME 34 • NUMBER 2

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The Journal of Medical Education is owned by the Association of American Medical Colleges and published monthly by the University of Chicago Press, 5750 Ellis Avenue, Chicago 37, Illinois. Second-class postage paid at Chicago, Illinois.

Subscription Rates: $7.00 per year, $13.50 two years, $19.50 three years, $1.00 per single copy; foreign, $8.00 per year, $15.50 two years, $22.50 three years, $1.25 per single copy; Pan America and Canada, $7.50 per year, $14.50 two years, $21.00 three years. Supplements, $2.00.

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The Journal of Medical Education serves as an international medium for the exchange of ideas in medical education, as well as a means of communicating the policies, programs, and problems of the Association. The Editorial Board welcomes the submission of manuscripts concerned with the broad field of medical education; this includes preparation for medical education; the medical school experience; intern and resident education; graduate and postgraduate medical education. The Editorial Board recognizes that medical education includes the activities of faculty, students, administrators, and those of the practicing profession who also teach and learn. Thus, it invites communications from any of these sources.

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Medical Education Forum includes editorials, letters, comments, criticisms, and excerpts from important addresses.

News from the Medical Schools: Material for this section should be transmitted to the News Editor, Mr. Tom Coleman, 2530 Ridge Avenue, Evanston, Illinois. Announcements of major faculty and administrative appointments, news of distinguished visitors and significant educational developments will be included. It is not possible to publish notices on grants-in-aid for scientific research.

Items of Current Interest: Audio-visual news and notices from national and federal agencies appear in this section.

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Address all correspondence regarding manuscripts, editorials, and letters to the Editor to the Editorial Office, University Hospitals, University of Wisconsin, Madison 6, Wisconsin.

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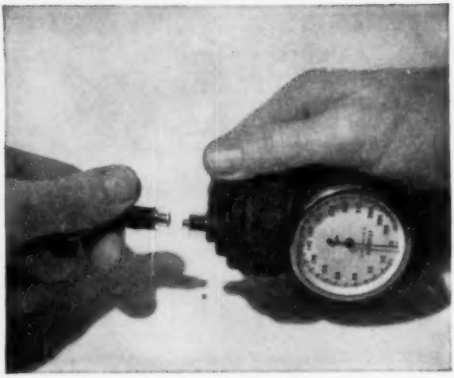

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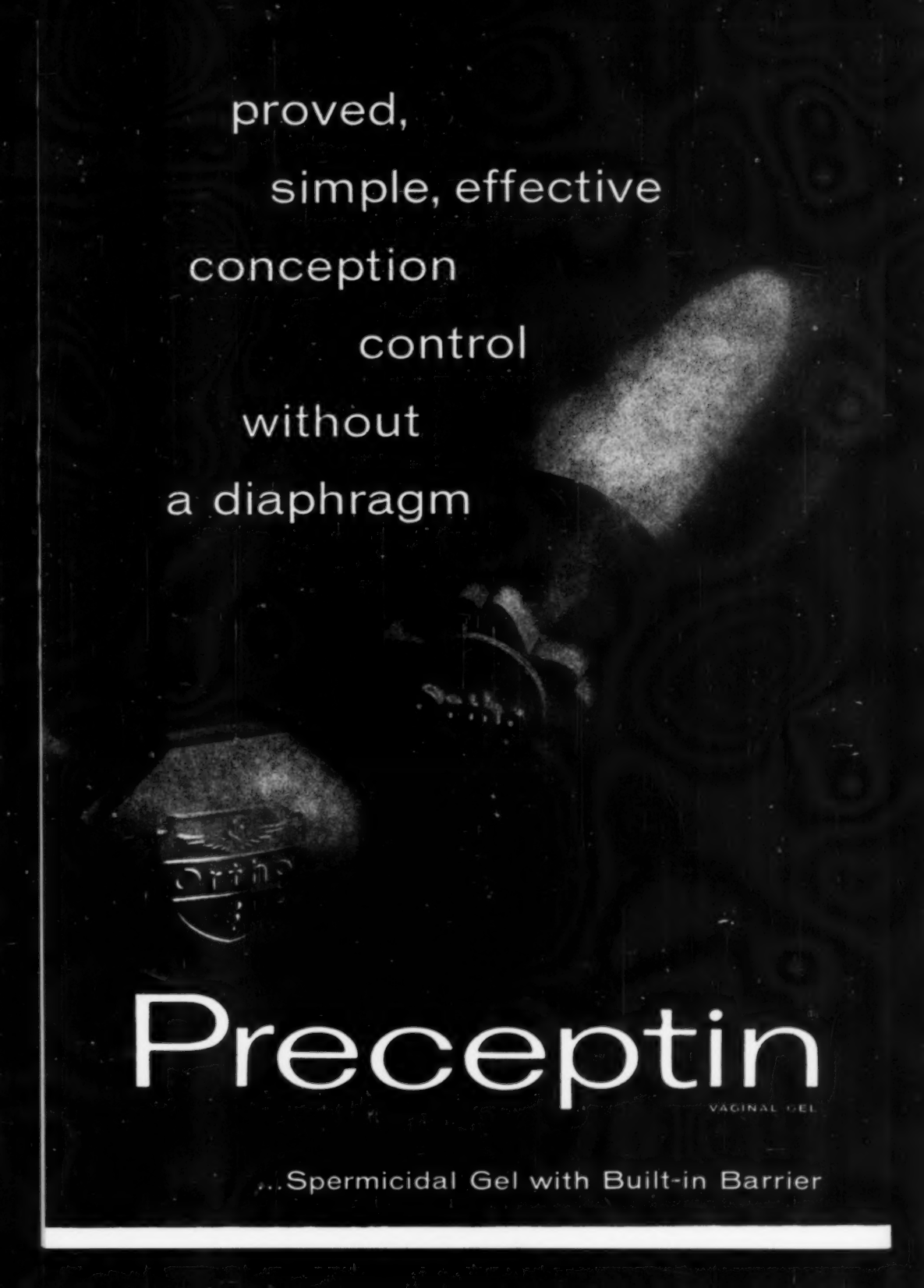
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Calendar of Meetings

ASSOCIATION OF AMERICAN MEDICAL COLLEGES

70th Annual Meeting, November 2–4

Edgewater Beach Hotel, Chicago, Ill.

FEBRUARY

American College of Surgeons, Sectional Meeting, Hotel Vancouver, Vancouver, B.C., Feb. 26–28. Dr. Michael L. Mason, 40 E. Erie St., Chicago 11, Secretary.

Association of Clinical Scientists, Scientific Session, Mobile, Ala., Feb. 27–28. Dr. Earl B. Wert, Mobile Infirmary, Mobile, Ala., Chairman.

California Medical Association, Sheraton-Palace Hotel, San Francisco, Feb. 22–25. Mr. John Hunton, 450 Sutter St., San Francisco 8, Executive Secretary.

Colorado State Medical Society, Midwinter Clinical Session, Shirley-Savoy Hotel, Feb. 17–20. Mr. Harvey T. Sethman, 1612 Tremont Place, Denver 2, Executive Secretary.

MARCH

American College of Allergists, Fairmont Hotel, San Francisco, Mar. 15–20. Dr. M. Coleman Harris, 450 Sutter St., San Francisco, Secretary.

American College of Surgeons, Sectional Meeting for Surgeons and Nurses, Kiel Auditorium, St. Louis, Mar. 9–12. Dr. Michael L. Mason, 40 E. Erie St., Chicago 11, Secretary.

Michigan Academy of General Practice, Spring Symposium on the "Overweight and Underweight," Sheraton-Cadillac Hotel, Detroit, Mar. 4. Dr. F. P. Rhoades, 970 Maccabees Bldg., Detroit 2, Convention Manager.

National Health Council, Palmer House, Chicago, Mar. 17–19. Mr. Philip E. Ryan, 1790 Broadway, New York 19, Executive Director.

New Orleans Graduate Medical Assembly, Roosevelt Hotel, New Orleans, Mar. 2–5. Maurice E. St. Martin, 1430 Tulane Ave., New Orleans 12, Secretary.

Southeastern Surgical Congress, Deauville Hotel, Miami Beach, Fla., Mar. 9–12. Dr. Benjamin T. Beasley, 45 Edgewood Ave., S.E., Atlanta 3, Ga., Secretary.

Southwestern Surgical Congress, New Brown Palace Hotel, Denver, Mar. 30–Apr. 1. Dr. C. M. O'Leary, 1213 Medical Arts Bldg., Oklahoma City, Okla., Secretary.

APRIL

Aero Medical Association, Hotel Statler, Los Angeles, Apr. 27–29. Dr. Thomas H. Sutherland, P.O. Box 26, Marion, Ohio, Secretary.

American Academy of General Practice, San Francisco, Apr. 6–9. Mr. Mac F. Cahal, Wolker Blvd., at Brookside, Kansas City 12, Mo., Executive Secretary.

American Academy of Neurology, Statler Hotel, Los Angeles, Apr. 13–18. Dr. Joseph M. Foley, Boston City Hosp., Boston, Secretary.

American Association of Anatomists, Seattle, Apr. 1–3. Dr. B. Flexner, Univ. of Pa., Med. School, Philadelphia 4, Secretary.

American Association for Cleft Palate Rehabilitation, Sheraton Hotel, Philadelphia, Apr. 30–May 2. Dr. D. C. Spriestersbach, Univ. Hosps., Iowa City, Ia., Secretary.

American Association of Genito-Urinary Surgeons, Seaview Country Club, Absecon, N.J., Apr. 15–17. Dr. William J. Engel, 2020 E. 93d St., Cleveland 6, Secretary.

American Association of Immunologists, Atlantic City, N.J., Apr. 13–17. Dr. Calderon Howe, 630 W. 168th St., New York 32, Secretary.

American Association of Pathologists and Bacteriologists, Somerset Hotel, Boston, Apr. 23–25. Dr. Russell L. Holman, 1542 Tulane Ave., New Orleans 12, Secretary.

American Association for the Study of Neoplastic Diseases, Hotel Greystone, Gatlinburg, Tenn., Apr. 30–May 4. Dr. Bruce H. Sisler, Box 268, Gatlinburg, Tenn., Secretary.

American Association for Thoracic Surgery, Statler Hotel, Los Angeles, Apr. 21–23. Dr. Hiram T. Langston, 7730 Carondelet Ave., St. Louis 5, Secretary.

American College of Obstetricians & Gynecologists, Traymore Hotel, Atlantic City, N.J., Apr. 5–9. Dr. John C. Ullery, 15 S. Clark St., Chicago 3, Secretary.

American College of Physicians, Conrad Hilton Hotel, Chicago, Apr. 20–24. Mr. E. R. Loveland, 4200 Pine St., Philadelphia 4, Executive Secretary.

American College of Surgeons, Sectional Meeting for Surgeons and Nurses, The Queen Elizabeth Hotel, Montreal, Quebec, Apr. 6–9. Dr. Michael L. Mason, 40 E. Erie St., Chicago 11, Secretary.

American Group Psychotherapy Association, Western Regional Meeting, Sheraton-Palace Hotel, San Francisco, April 2–3. Dr. H. S. Morgenstern, Langley Porter Clinic, U.C. Medical Center, San Francisco, Chairman.

American Psychiatric Association, Civic Auditorium, Philadelphia, Apr. 27–May 1. Dr. C. H. Hardin Branch, 156 Westminster Ave., Salt Lake City, Secretary.

American Surgical Association, Fairmont Hotel, San Francisco, Apr. 15–17. Dr. W. A. Altemeier, Cincinnati Gen. Hospital, Cincinnati 29, Secretary.

American Urological Association, Chalfonte-Haddon Hall, Atlantic City, N.J., Apr. 20–23. Dr. Samuel L. Raines, 188 S. Bellevue Blvd., Memphis, Tenn., Secretary.

American Venereal Disease Association, Johns Hopkins University, Baltimore, Apr. 27–28. Dr. S. Ross Taggart, 1325 Upshur St., N.W., Washington 11, D.C., Secretary-Treasurer.

Student American Medical Association, Morrison Hotel, Chicago, Apr. 30–May 3. Mr. Russell F. Staudacher, 430 N. Michigan, Chicago 11, Executive Secretary.

INTERNATIONAL AND FOREIGN

FEBRUARY

Central Surgical Association, Montreal, Can., Feb. 19–21. Dr. A. D. McLachlin, Victoria Hosp., London, Ontario, Secretary.

MARCH

Bahamas Medical Conference (Seventh), British Colonial Hotel, Nassau, Bahamas, Mar. 30–Apr. 12. For information write: Dr. B. L. Frank, 23 E. 79th St., New York 21, N.Y., U.S.A.

Canadian Medical Association, British Columbia Division, Section of General Practice, Harrison Hot Springs Hotel, Harrison Hot Springs, B.C., Mar. 19–21. Dr. W. Douglas McCauly, 149 Kenneth St., Duncan, B.C., Registrations.

International Committee of Military Medicine & Pharmacy, Paris, France, Mar. 31–Apr. 5. For information address: International Committee of Military Medicine & Pharmacy, Hospital Militaire, 79, rue Saint Laurent, Liege, Belgium.

APRIL

Congress of International Anesthesia Research Society, Miami Beach, Fla., U.S.A., Apr. 20–23. Dr. A. William Friend, East 107 & Park Lane, Cleveland 6, Ohio, U.S.A., Executive Secretary.

Japan Medical Congress, Tokyo, Japan, Apr. 1–5. For information address: The Japan Medical Association, 2 Chone Surigadai Kanda, Chiyoda-Ku, Tokyo, Japan.

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By George H. Bell, *B.Sc., M.D., F.R.F.P.S.G., F.R.S.E., Professor of Physiology in the University of St. Andrews at Queen's College, Dundee;* J. Norman Davidson, *M.D., D.Sc., F.R.F.P.S.G., F.R.I.C., F.R.S.E., Gardiner Professor of Biochemistry in the University of Glasgow; and* Harold Scarborough, *M.B., Ph.D., F.R.C.P.E., M.R.C.P., Professor of Medicine in the Welsh National School of Medicine of the University of Wales and Director of the Medical Unit in the Royal Infirmary, Cardiff.*

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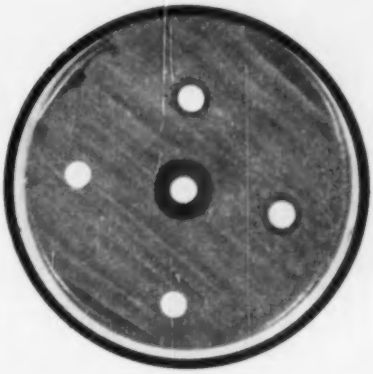

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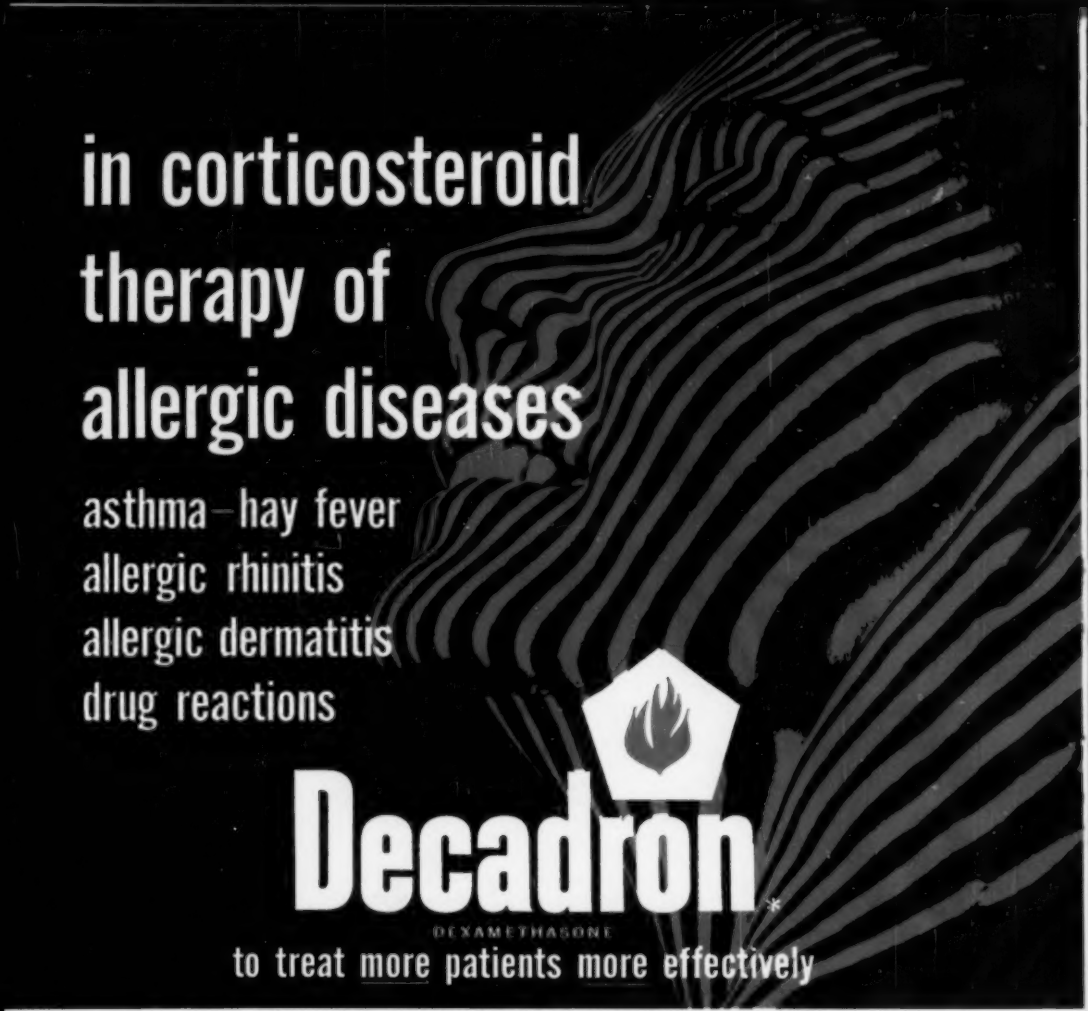

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Table of Contents

"Lung" at work

In this experiment at the National Heart Institute a researcher compiles data on the work of breathing. He is studying resistance to air flow within the respiratory passages of a model human lung.

The large plastic bags contain known mixtures of gases. An ordinary vacuum cleaner (right) draws these gases through the lung model (glass jar, center). Gas flow and pressure are recorded by the instrument at the left.

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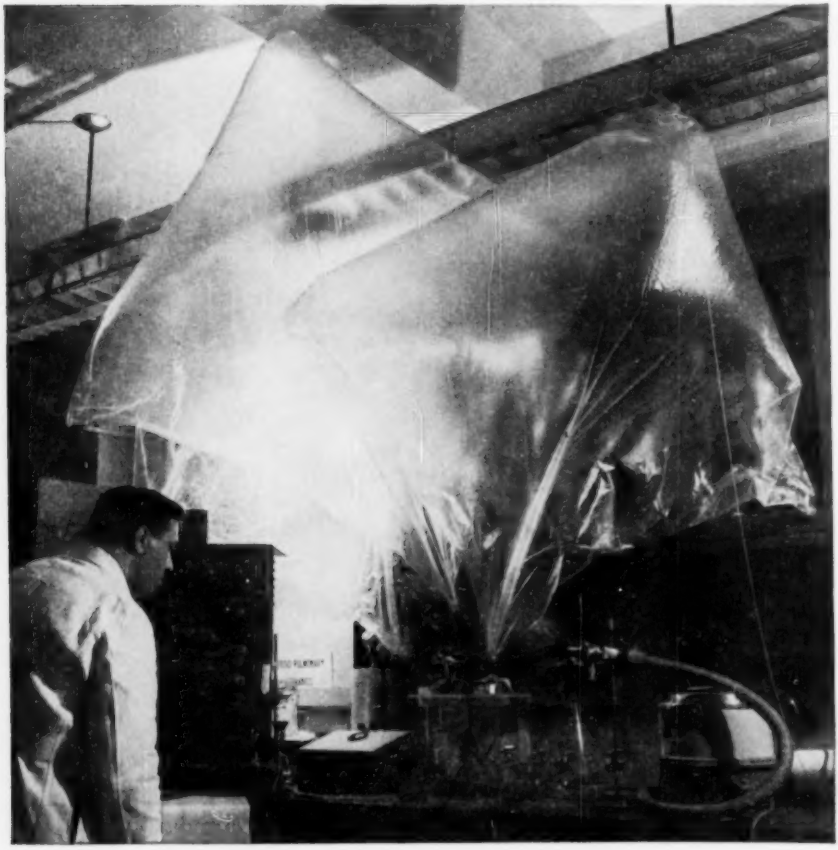

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The Veterans Administration–Medical School Relationship

JOHN C. NUNEMAKER, M.D.*
American Medical Association, Chicago, Ill.

It is now 13 years since Congress enacted legislation creating the present Department of Medicine and Surgery within the Veterans Administration. In 1946 this action permitted the inauguration of a program of graduate training in association with medical schools, which marks a milestone in the progress of the Federal government in cooperation with civilian medicine.

In 1950 a comprehensive report by Kracke (1) related the high quality of medical care in the Veterans Hospitals to "constant emphasis placed on education and research." In 1952 the Honorable John E. Rankin, Chairman of the Committee on Veterans Affairs of the House of Representatives, made the following significant statement (4):

> One of the most outstanding landmarks in veterans' legislation since the beginning of this nation was the enactment of Public Law 293, Seventy-Ninth Congress, approved January 3, 1946, which established in the Veterans Administration the Department of Medicine and Surgery. The Committee on World War Veterans' Legislation, the predecessor of this committee, conducted extensive hearings and held a number of executive sessions on this subject and reported favorably H.R. 4717, Seventy-Ninth Congress, which became Public Law 293, an independent act. Our veterans now receive the best medical care in the world.

* Associate Secretary of the Council on Medical Education and Hospitals, American Medical Association, 535 North Dearborn Street, Chicago, Illinois; and formerly Director of the Education Service, Department of Medicine and Surgery, Veterans Administration, Washington, D.C.

Because of the circumstances attending the cessation of military activities in 1945, both VA hospitals and medical schools anticipated enormous problems. The Veterans Administration was faced with a rapid and vast expansion of clinical facilities to care for discharged military personnel who would become veterans legally eligible for hospitalization. Medical schools faced a similar need for expansion of clinical facilities within which their faculties could train the large numbers of discharged medical officers who wished to resume their interrupted graduate training in university hospital environments.

During late 1945, in anticipation of permissive legislation, Veterans Administration medical officials had corresponded with deans of medical schools on the desirability of an association. The objective was not only to provide better care through the conduct of graduate training programs in VA hospitals, but also to assist in recruiting physicians to the full-time, part-time, and visiting staffs of those VA hospitals near enough to become associated with medical schools.

This exchange of letters between the Veterans Administration and the deans of medical schools was not formalized by any sort of written contract, but found expression in a document issued January 30, 1946, by the Chief Medical Director and identified as Policy Memorandum No. 2 (Exhibit A). This document informally stated the "gentleman's agreement" under which 90 per cent of the nation's medical schools

agreed to the association and is the basis upon which all subsequent relationships have been conducted. Deans of medical schools nominated Deans Committees to the Chief Medical Director, who in turn appointed such members by a simple letter welcoming each of them as a member of the Deans Committee for a specific VA hospital.

The interest of the Association of American Medical Colleges in this association of Veterans Administration hospitals and medical schools was reflected through the creation of a Committee on VA-Medical School Relationships. This committee makes a report at the annual meeting of the Association of American Medical Colleges. At the Sixty-Sixth Annual Meeting in 1955 (2), this Committee included the following statement in its report to the Association:

> Your committee recommends to the Association that it endorse and reaffirm its enthusiastic support of the relations between the VA and the medical schools which have been in effect for the past ten years.

At the Sixty-Eighth Annual Meeting in 1957 (3), this same committee recommended to the Association that its Executive Council consider making an evaluation of VA-medical school relationships through its own auspices. The Committee had been informed that the Veterans Administration Department of Medicine and Surgery was soon to make such a survey.

On November 21, 1957, this survey was inaugurated by a letter to all deans of medical schools associated with VA hospitals and to the managers of all VA hospitals having residency training programs (Exhibit B). Included with the letter were copies of Policy Memorandum No. 2 (Exhibit A) and "The Functions of a Deans Committee" (Exhibit C). This re-evaluation was thought to be timely because of the marked change in conditions at the time as compared with the immediate postwar period 12 years earlier.

Replies were received from the majority of deans or Deans Committees representing the 73 medical schools with which VA hospitals were currently associated. They had obviously spent much time and effort in reflecting to the Veterans Administration the concern of medical school faculties with modern-day graduate medical education and the position of influence achieved by the Federal government through support of such programs in Veterans Administration hospitals.

Replies were also received from a small number of Medical Advisory Committees supervising programs in those hospitals not associated with medical schools. Managers replied from 98 VA hospitals having residency training programs. The replies from the Deans Committees and the managers of hospitals predominantly for neurologic and psychiatric patients or for patients with tuberculosis were less significant than were replies pertaining to GM and S (general medical and surgical) VA hospitals. The replies are summarized below in the order in which the questions were asked in the letter of November 21, 1957 (Exhibit B).

a) There was unanimous endorsement on the question of continued support of the VA-medical school relationship in each local community. In the majority of cases, this expression of endorsement was enthusiastic and vigorous. In a very small number of instances, the endorsement was qualified by the statement that there was room for improvement in the conditions under which the relationship was maintained.

b) The fundamental soundness of Policy Memorandum No. 2 was attested by the majority of Deans Committees. Some commented that this is a remarkable document to have withstood the test of time with so little need for change. The significant changes suggested were that it be brought up-to-date in view of the normal evolution from the immediate postwar situation, that veteran status and specialty certification be modified as requirements for the appointment of service chiefs and visiting staff, and that a policy statement be included as to the responsibility of medical schools for both undergraduate teaching and for research in VA hospitals. In a very few instances, it was

suggested that responsibility for medical care be extended to the Deans Committees. On this latter point there was a sharp division of opinion, with the majority of Deans Committees endorsing the policy that responsibility for medical care cannot be delegated by the Veterans Administration to other than VA employees.

c) In only one instance did a Deans Committee feel that it did not function effectively. A number did report that the effectiveness of this function could be improved and that efforts were under way in that direction. The following variety of modifications of the relationship was suggested:

1. That the Deans Committees' functions listed in Exhibit C be revised to include Deans Committees' approval of appointment of a hospital manager and director of professional services,
2. That a statement be included on responsibility for undergraduate teaching,
3. That the duties include "advice and counsel on all medical planning and its fiscal support,"
4. That the Deans Committees should submit an annual education and training budget, and
5. That the Deans Committees should evaluate the performance of each VA hospital service and submit an annual report to that effect.

In a few instances, hospital managers indicated that Deans Committees should be given an opportunity for complete reorientation on current policy in contrast to some of the very permissive policies enunciated in early 1946 prior to the issuance of Policy Memorandum No. 2.

d) Benefits of VA-medical school relationship to the medical faculty were reflected principally as strengthening of the medical school faculties by the addition of many outstanding men who participate effectively in the medical school teaching program. Because of their full-time appointments in the Veterans Administration, those faculty members require no additional salary from the medical school. A small number reported that visiting staff assignments to Veterans Administration hospitals provided a significant supplement to the pay of faculty members.

The benefits to the medical students were reflected in terms of exposure to additional teachers and the excellent supervision by the full-time VA staff serving in their capacity of faculty members. There were many comments on the different types and variety of teaching material to which students were exposed with the opportunity for thorough study under optimal hospital conditions.

The majority of deans emphasized that the mutual advantages of this relationship could be enhanced by improving the recruitment and retention of VA staff. The mechanisms suggested for this effort were:

1. To allow supplementary pay by the university in an effort to equalize the pay of the VA staff member with his university colleague of equal rank,
2. To extend certain pay and travel benefits to staff members who are half-time with the VA and half-time with the medical school, but without any private practice whatever,
3. To permit honoraria and royalties for the full-time staff,
4. To increase the salaries paid by the VA,[1]
5. To stabilize the visiting staff budget,
6. To increase visiting staff fees, and
7. To revise the Central Office fund apportionment procedures to hospitals.

e) A majority of the deans emphasized that improvement of the quality of the residency program required improving the quality of the full-time VA hospital staff members. Other features of the residency program which they felt could be improved were stipends for residents,[2] fringe benefits such as meals and quarters for married residents, and the geographical location of VA hospitals. Many urged continued efforts to integrate fully residency training programs with those of the university.

f) The majority of replies on improving

[1] Salary increases became effective retroactively to January 12, 1958, following Congressional action.

[2] Stipends for residents were increased July 1, 1958. Fringe benefits in lieu of salary continue to be contrary to Federal policy.

the quality of the research program emphasized the desirability of a stable research budget, the addition of animal quarters, and improvement in the quality of the staff capable of research. Many deans as well as hospital managers urged permitting more full-time staff so that time would be available for research, or, in lieu of this, the employment of more physicians full-time for the sole purpose of research.[3] The majority of Deans Committees felt that their responsibilities for the hospital research program were now being discharged properly through Deans Committees' representation on the Hospital Research and Education Committee. The majority felt that advice and guidance were sufficient, while a small number felt that the Deans Committees should actually direct and supervise VA research programs.

It is remarkable that productive and mutually beneficial relationships have been maintained over this period of more than a decade in view of the variety and nature of the different VA hospitals and the variety and difference in size and philosophy of the various medical schools and their surrounding communities. It is the feeling of the author that further study will reveal that VA-medical school relationships are best in those situations where the medical school faculty relies on the Veterans Administration hospital staff on a partnership basis in the clinical teaching of undergraduate medical students.

Encouraged by the above survey, the Education Service of the Department of Medicine and Surgery has included in its forthcoming manual on education and training several statements on the VA-medical school relationship which have never been previously published and which have been requested frequently for the guidance of both Deans Committees and VA hospital managers. This manual will also delineate the education functions of the Hospital Research and Education Committee. In addition, it will emphasize the degree to which the operation of training programs has been decentralized to the manager and to the Deans Committees for maximum effectiveness in the graduate training program of the local community. This manual will emphasize that voluntary discontinuance of the few remaining medical internship programs is encouraged if they are not completely satisfactory.

This survey has indicated clearly that, in the isolated instances where the VA-medical school relationship is not mutually beneficial, the major cause is lack of proper communication and understanding among all concerned. In some few instances, medical school faculties adhere to certain principles and policies which were approved by the Central Office in 1946, but which are inappropriate today. It is hoped that, in the future, the Veterans Administration can support regional or area meetings between the deans of the several medical schools in those areas and the Central Office and Area Medical Director's staff so that there can be mutual sharing of information and planning for the future.

This survey supports the conviction of the Veterans Administration staff and its advisory committees that this type of cooperation between the Federal government and educational institutions has been in the best interests of the national health program.

Since the primary mission of the Department of Medicine and Surgery of the Veterans Administration is the provision of medical care, the association with medical schools assures that the quality of such care will be superior. Approximately half the VA hospitals are not associated with medical schools because of their geographic location. One of the objectives of the Education and Training Program of the Department of Medicine and Surgery is to extend to all VA hospitals the advantages of some form of medical school stimulus. Graduate training programs are not planned for additional VA hospitals, but vigorous and continuous postgraduate education for staff in the

[3] Since the primary purpose of a hospital is patient care, it is contrary to established policy to employ professional staff full-time for research, except in the case of trainees.

peripheral hospitals will assure the maintenance of high quality medical care. Such activities will necessarily involve medical school faculty, many of whom will be VA staff members. Medical school faculties are now participating in VA postgraduate programs to a limited degree and will participate further provided the administrative support can be developed by the Veterans Administration. The support of a productive program in the postgraduate field is largely one for solution within the Veterans Administration.

The many helpful suggestions from Deans Committees will be of material assistance in evolving VA policy of the future. In the years to come, even greater reliance may be placed on the use of VA facilities in the training of physicians, but the success of this effort will require continued attention to the features which are mutually beneficial to both the medical schools and the Veterans Administration.

This survey was conducted by the Veterans Administration for its own information and guidance in its future relations with the schools. The report of the survey has been submitted to the Association of American Medical Colleges through its Committee on VA-Medical School Relationships with the knowledge that the Committee may prefer a survey under the auspices of the Association. The highly critical nature of some of the deans' comments on local aberrations of the general policy does not suggest, however, that the source of the inquiry in any way dampened the spirit of frank criticism.

There were, through the years, many channels for exchange of opinion between the school faculties and the Veterans Administration's central administration, including the above committee, which was designed for this particular function. These exchanges, usually, tended to focus on local problems rather than general.

The survey being reported, however, asked all for a challenge to the whole basis of the novel assumption of a partnership between the medical schools of America and a neglected system of national hospitals for the twin benefits of better care and better teaching. The near unanimity of opinion on the basic assumption, 12 years later, is a remarkable tribute to the devotion of our teachers to better care and of our hospitals to better teaching. Both bear witness to the wisdom of the authors of the original policy memorandum which dealt with ideas rather than persons but in language that most persons understood.

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3. Minutes of 68th Annual Meeting of Association of American Medical Colleges. *Ibid.*, **33**:107, 1958.
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EXHIBIT A

January 30, 1946 POLICY MEMORANDUM NO. 2

SUBJECT: Policy in Association of Veterans' Hospitals with Medical Schools.

1. General Considerations:

a. *Necessity for mutual understanding and cooperation.*—The Department of Medicine and Surgery of the Veterans Administration is embarking upon a program that is without precedent in the history of Federal hospitalization. It would, therefore, be most unusual if numerous problems did not arise for which no fully satisfactory solution were immediately apparent. Such problems frequently can be solved only by trial and error; and, until workable solutions are found, both parties in the program must exercise tolerance if the program is not to fail.

There can be no doubt of the good faith of both parties. The schools of medicine and other teaching centers are cooperating with the three-fold purpose of giving the veteran the highest quality of medical care, of affording the medical veteran the opportunity for postgraduate study which he was compelled to forego in serving his country, and of raising generally the standard of medical practice in the United States by the expression of facilities for graduate education.

The purpose of the Veterans Administration is simple: affording the veteran a much higher standard of medical care than could be given him with a wholly full-time medical service.

The purpose of both parties being unselfish, and there being no conflict of objectives, there can be no serious disagreement over methods. It will be recognized that the Veterans Administration is charged

with certain legal responsibilities in connection with the medical care of veterans which it cannot delegate, if it would. Yet the discharge of these responsibilities need not interfere with the exercise by the schools of their prerogatives in the field of education.

All medical authorities of the Veterans Administration will cooperate fully at all times with the representatives of associated schools and other centers. It is the earnest desire of the Acting Chief Medical Director that our relations with our colleages be cordial as well as productive.

b. *General division of responsibility.*—The Veterans Administration retains full responsibility for the care of patients, including professional treatment, and the school of medicine accepts responsibility for all graduate education and training.

2. The Veterans Administration:

a. Operates and administers the hospital.

b. As rapidly as fully qualified men can be had, will furnish full-time chiefs of all services (see paragraph 5 below) who will supervise and direct the work of their respective staffs, including the part-time attending staff furnished from the School of Medicine, insofar as the professional care of patients is concerned. Nominations by Deans Committees for such full-time positions will be welcomed; and, unless there be impelling reasons to the contrary, will be approved wherever vacancies exist. These service chiefs are fully responsible to their immediate superior in the Veterans Administration.

c. Appoint the consultants, the part-time attending staff and the residents nominated by the Deans Committee and approved by the Veterans Administration.

d. Cooperate fully with the Schools of Medicine in the graduate education and training program.

3. The Schools of Medicine:

a. Will organize a Deans Committee, composed of senior faculty members from all schools cooperating in each project, whether or not furnishing any of the attending or resident staff.

b. Will nominate an attending staff of diplomates of specialty boards in the numbers and qualifications agreed upon by the Deans Committee and the Veterans Administration. (See 6e)

c. Will nominate, from applicants, the residents for graduate education and training.

d. Will supervise and direct, through the Manager of the hospital *and the Consultants*, the training of residents.

e. Will nominate the consultants for appointment by the Veterans Administration.

4. Hospital Managers:

a. Are fully responsible for the operation of their hospitals.

b. Will cooperate with the Deans Committee, bringing to its attention any dereliction of duty on the part of any of its nominees.

5. Chiefs of Service:

a. Are responsible to their superior in the Veterans Administration for the conduct of their services.

b. Will bring to the attention of their superior, for his action, such cases as they are unable to deal with personally of dereliction of duty or incompetence on the part of any full-time or part-time staffs under their control.

c. Will, *together with the part-time attending staff*, under the direction of the Manager, supervise the education and training program.

d. When full-time employees of the Veterans Administration, will be diplomates of their respective boards and will be acceptable to the Deans Committee and to the specialty boards concerned. It is the urgent purpose of the Veterans Administration to place full-time fully qualified and certified chiefs of service for all services in each hospital associated with a School of Medicine. Except in cases where the chief selected has local affiliations, which might embarrass or prejudice his relations with one or another of the associated schools, his initial assignment may not be cleared through the Deans Committee. In all cases, when it has been conclusively demonstrated that a chief of service cannot cooperate with a Deans Committee, he will be transferred (if efficient otherwise) and replaced by another.

Until this purpose can be fully accomplished, however, in order that a hospital may obtain approval for resident training by one or another specialty board, it may be necessary to appoint part-time chiefs of services who meet the requirements of the boards. This will be done; but it will be done with the understanding that the part-time chiefs will be replaced with qualified full-time chiefs as rapidly as they become available. The duties and responsibilities of part-time chiefs will be the same as those of full-time chiefs.

6. Part-time Attending Staff:

a. Will be responsible to the respective chiefs of service.

b. Will accept full responsibility for the proper care and treatment of patients in their charge.

c. Will give adequate training to residents assigned to their service.

d. Will be veterans unless approval in each case has been given by the Chief Medical Director.

e. Will be diplomates of their respective boards and acceptable to such boards for direction of resident training. Exception may be made in the case of a veteran who has completed the first part of his board examination, but whose completion of the examination was interrupted by the exigencies of the military service.

f. Will hold faculty appointments in one or another of the associated Schools of Medicine, or will be outstanding members of the profession of the caliber of faculty members.

7. Consultants:

a. Will be veterans unless approval in each case has been given by the Chief Medical Director.

b. Will be members of the faculty, of professorial rank, of one or another of the associated Schools of Medicine.

c. Will, as representatives of the Schools of Medicine, direct and be responsible for the educational training of residents.

d. Will afford to the Manager and the proper Chief of Service the benefit of their professional experience and counsel.

e. Will conduct their duties through, and in cooperation with, the Manager and proper Chief of Service, *and also, in matters of education and training, with the part-time Attending Staff*—always, however, coordinating with the Chief of Service.

EXHIBIT B

VETERANS ADMINISTRATION
Department of Medicine and Surgery
Washington 25, D.C.

November 21, 1957
In reply refer to: 152

DEAR DR. ———:

After 11 years of successful cooperation, a review of the VA-Medical School relationship is in order.

As a base line, Policy Memorandum No. 2 should be reviewed by all participating parties. A separate sheet, listing the functions of the Deans Committee, is likewise enclosed.

This letter is a request that each Deans Committee, Medical Advisory Committee, and VA hospital manager address a letter to the Chief Medical Director indicating their assessment of the present status of the program at their location and recommendations for the future.

a. In the light of your experience, should the medical school-VA relationship be continued locally?
b. Is Policy Memorandum No. 2 fundamentally sound, or are changes suggested?
c. Does the Deans Committee or Medical Advisory Committee function effectively in its association with the VA? If not, how should this relationship be modified?
d. What benefits have accrued to the medical faculty and the medical students from this cooperative effort? How might the mutual advantages of this relationship be enhanced?
e. How can we improve the quality of the residency program?
f. How can we improve the quality of the research program? What should be the Deans Committee responsibility for the hospital research program?

Your response should not be bound by existing laws, regulations, or policies. We seek your candid opinion in the interest of progress.

Very sincerely,

JOHN C. NUNEMAKER, M.D.
Director, Education Service
Research and Education

Encls. Secretary, AAMC
CC TO: Dean of each medical school affiliated with VA hospitals, VA hospitals with approved residency programs and each Area Med. Dir.

EXHIBIT C

November 12, 1957

M-3, Part II, Chapter 1, paragraph 1.08

a. The Deans Committee, under a Chairman, performs the following functions:

(1) Cooperates with all interested Veterans Administration personnel, in accordance with current Veterans Administration policies and procedures, in establishing medical residency programs in Veterans Administration hospitals, and in determining the scope of such programs.

(2) Is responsible for standards of medical residency training; collaborates with all medical and nonmedical hospital personnel through the Manager or Director, Professional Services, on matters affecting medical residency training, including clinical standards and practice, space utilization, structural alterations, and selection and use of equipment and supplies.

(3) Selects and nominates candidates for graduate education and training in the various medical specialties; formulates and directs their course of study, both within the Veterans Administration installation and in outside affiliated training.

(4) Selects and nominates to the Manager attending and consulting staff; in collaboration with the Manager or Director, Professional Services, recommends their schedules of attendance at the installation.

(5) Collaborates with the Manager or Director, Professional Services, and his staff in the supervision of their medical residents and consulting and attending staff.

(6) Is responsible for the standards of all medical research activities except those Special Research Laboratories under direction of the Director, Research Service; cooperates with the Manager or Director, Professional Services, and his staff in the efficient operation of the research laboratory by correlation with the training program.

(7) Nominates to the Manager full-time and regular part-time physicians of the professional staff of the hospital, including the chiefs of service. If no nominees are afforded by the Deans Committee, any candidates from other sources must be accep[illegible] to this group.

(A Medical Advisory Committee is a local committee performing Deans Committee functions in a few of the hospitals lacking medical school association.)

Robley Dunglison, M.D.
1798–1869
American Medical Educator*

SAMUEL X. RADBILL, M.D.†
7043 Elmwood Ave., Philadelphia 42, Pa.

Robley Dunglison was one of America's most distinguished medical teachers and authors, during the middle third of the 19th century, who exerted a great influence on medical education. The son of William and Elizabeth Dunglison, he was born on January 4th, 1798, in the town of Keswick in the lake district of England (16). His education was commenced in Cumberlandshire, at first being planned with a view to his becoming a planter in the West Indies where his uncle, for whom he was named, was an extensive proprietor. However, when the uncle died, Dunglison's idea of becoming a planter was gradually abandoned (23).

From a portrait at the University of Virginia

ROBLEY DUNGLISON AS A YOUTH

Deciding upon a medical career, he commenced the study of medicine at the age of 17 and was apprenticed to John Edmondson, a surgeon of Keswick. In accordance with the custom then general in England (26) he remained as a student of medicine with his village preceptor for 1 year and then went to London where, for a time, he acted as an assistant to Dr. Charles Thomas Haden. Haden became a most useful friend to him and was greatly admired. Dunglison frequently in later life referred to Haden in terms of great respect and reverence. From Dr. Haden he not only acquired considerable medical knowledge, but also a great taste for music, which the London preceptor and his wife cultivated with great taste and skill (18). Dunglison also brought forth a second edition of a translation of Magendie's Formulary by Haden when the first edition was rapidly exhausted, in 1824. To this he added copious notes and comments of his own. Under the title of *New Medical Remedies* this book was later reproduced by Dunglison in this country in 1837. Haden's interest in the diseases of children also directed the attention of his pupil to that particular field, as we shall see later on.

* This is the sixth in the current series of biographies of eminent medical educators.

† Lecturer in the History of Pediatrics, Graduate School of Medicine, University of Pennsylvania.

The youthful medical aspirant next went to Edinburgh to attend a course of lectures at the University which was still one of the leading medical colleges of Europe. Andrew Duncan, Sr., James Gregory, Thomas Charles Hope, James Hamilton, and John Barclay were some of the famous medical teachers under whom Dunglison studied while there. James Russell was also teaching clinical surgery, lecturing both at the University and at the Royal Infirmary, and Dunglison likewise studied there. At the Royal Infirmary of Edinburgh clinical material was available to illustrate the lectures to the students. One can derive some idea what clinical teaching at Edinburgh was like at the time Dunglison was there from the description given by Dr. Graves, who was a student there about the same time (1819):

> Two clinical clerks were appointed for the male and female wards, selected by the physician from among the senior pupils. Their business was to write an accurate history of the cases, to report the effects of medicines, and to record the symptoms which might have occurred since the physician's last visit.
>
> At his daily visit, the physician stood at the bed of each patient, and, having received the necessary information from his clerk, he examined the patient, interrogating him in a loud voice, while the clerk repeated the patient's answers in a tone of voice equally loud. This was done to enable the whole audience to understand what was going on, and required an exertion almost stentorian to render this conversation between the physician and his patient audible by the more distant members of the class. Every word was attentively listened to and forthwith registered most faithfully in each student's case book; and afterwards all the observations of the professors, made in their clinical lectures, were taken down with equal care and fidelity (9).

Returning to London, Dunglison attended more medical lectures. Asley Cooper, friend of Haden, was then at Guys Hospital, and undoubtedly Dunglison attended his lectures in Anatomy there. Formal teaching was not done in London at that time at regular medical colleges, but, instead, hospital doctors took pupils and gave instruction at the hospitals. Next he went to Paris, where he also attended lectures at the École de Médecine and took sundry private courses. France was the great Mecca for medical learning during the first half of the 19th century. While Dunglison was there Laennec was working with his stethoscope and actively engaged in teaching, the influence of Bichat was still alive, and Louis was starting his brilliant career, as were Alibert, Bouillaud, and Brettoneau; Corvisart was showing students how to percuss the chest; Larrey, Dupuytren, and Pinel were world-famous teachers; and Magendie was performing his experiments on live animals. Dunglison was revolted by experimentation on living animals, and he never got over his abhorrence of vivisection. In common with the medical students of Paris, he did ward work in the hospitals and special clinics in the mornings and listened to lectures and watched demonstrations in the afternoons, paying heed to the battle cry of Fourcroy, who in large part devised the system of medical education of France in the 1800's: "Peu lire, beaucoup voir et beaucoup faire (read little, see much, and do much) (1).

Returning to London he pursued his medical studies further, then passed examinations in 1818 at the Royal College of Surgeons of London and also at the Society of Apothecaries in London, commencing to practice in 1819. At this time the practice of medicine in and around London was largely controlled by the three medical corporations: The Royal College of Physicians, the Royal College of Surgeons, and the Society of Apothecaries (25). The privilege of the apothecary to practice medicine had been repeatedly affirmed in England, and, by the "Apothecaries Act" passed in 1815, the principle that all those who practice medicine must first be qualified was for the first time given recognition in England. Candidates for the examination of the Apothecaries Society were henceforth required to give proof of having served 5 years as ap-

prentices before they were awarded a license to practice (6).

The urge to write seems to be an inborn trait in some people. This urge appeared early in Dunglison's life and never faltered thereafter. In 1817 at the age of 19, while still a student, he first began to write for the press. One of the earliest articles, which actually was never published, was on the action of belladonna upon the pupil of the eye. For a year or two thereafter he was a regular correspondent of the *Monthly Magazine* of London, signing himself "Philos" (14). In 1822 he was editor of Baron Larrey's *Treatise on the Use of the Moxa as a Therapeutical Agent*. By 1823, in conjunction with his distinguished friend, Dr. Copland, he was placed on the editorial board of the *London Medical Repository*, a medical journal published under various titles from 1814 to 1836. He was also actively associated before emigrating from London, with the *Medical Intelligencer*, to which he himself contributed a paper on malaria in which he affirmed his belief that malaria was not in any way associated with miasma from vegetable and animal decomposition. This controversial position he took as a result of experiments undertaken with a "Miasmometer" in 1823, and he held to this view in his various writings and in his lectures to succeeding classes of students annually over a period of many years. In other words, he did not believe that the effluvia from rotting organic material could transmit malaria. (As far as I know he had no positive view as to what could transmit the disease.) The "Encyclopedic Dictionary of the Medical Sciences" was projected by Drs. Copland and Dunglison in 1823 and 1824 and arrangements made with the publisher, but this plan was never carried out.

He obtained his M.D. by examination from the University of Erlangen in Bavaria, Germany, with an inaugural dissertation "De Neuralgia," in 1823, and then determined to restrict himself to the field of the diseases of women and children, since general practice was distasteful to him. Through his various acquaintances he succeeded in obtaining the position of Physician Accoucheur to the Eastern Dispensary, one of the most extensive charities of London. He then published his first book, *Commentaries on the Diseases of the Stomach and the Bowels of Children* (London, 1824) (2). In this book, in the preface, he gives an account of Jadelot's "Physiognomical System," a theory based upon the idea that from a scrutiny of the infant's face diagnosis of internal disease could be made. This

From the Bradley Collection of the College of Physicians, Philadelphia.

ROBLEY DUNGLISON IN MIDDLE AGE

book contains chapters on intestinal worms, constipation, acidity, etc., and it contains one of the earliest chapters on intussusception. In his final literary effort, *Practice of Medicine*, the diseases of children also met with their due share of attention.

His penchant for teaching would also not be denied. He decided to give instruction on the subject of midwifery, which in those days included the diseases of women and children, and actually taught a single pupil

in his own lodgings. He advertised his course of lectures in Obstetrics in the *Medical Repository*, the course to begin in October. However, Francis Walker Gilmer arrived in London as an emissary of Thomas Jefferson, who was building the University of Virginia, in search of professors for the new college, and all Dunglison's plans were changed.

When Jefferson formulated a plan for the establishment of the University of Virginia, the medical department was included in the original group of schools proposed for the new institution (10). Jefferson would have preferred to staff his university with native Americans, and consideration was given for a chair of medicine to Dr. Thomas Cooper, but objections were raised to his Unitarian religious views. Rather than staff his university with native teachers having inferior qualifications, he sent Gilmer to England in search of men of high academic caliber. Gilmer, instructed to seek men possessed of a "due degree of science, talent for instruction, and correct habits and morals" (5), chose Dunglison for the chair of medicine. However, native talent in this country was not pleased with the choice of a foreigner for an American professional chair (24). In later years when Dunglison was dean at Jefferson Medical College he expressed his firm belief that "where a vacancy occurs in a professorship in a scientific or literary institution, the most desirable course would be for the appointing power to look abroad, as well as at home, and select him who is the most qualified in such matters. Such has been the policy of the University of Virginia; and . . . with many of the trustees of Jefferson Medical College . . . local influences are indeed apt to be all powerful; and where qualifications of candidates are equal should be decisive; but further than this they ought not to be permitted to weigh." He was admittedly depressed by the hostile attitude expressed toward his appointment but received a decided boost to his morale when he was agreeably surprised to learn, soon after his arrival in Virginia, that Yale had conferred upon him on September 13th, 1825, the degree of Doctor of Medicine, Honoris Causae.

Dunglison had been recommended to Gilmer in London by Dr. George Birbeck, who was the founder of a Mechanics Institute in London similar to the Franklin Institute of Philadelphia, with which Dunglison was later associated. Gilmer, after approaching Dunglison in the matter, wrote back to Jefferson and described his prospect as a "very intelligent and laborious gentleman and a writer of considerable eminence in various medical and anatomical subjects" (19).

Leaving London was a serious matter to a young man of 26, just starting out on a career with great promise. Dunglison consulted a number of his friends, including Mr. Leadam, an apothecary, for advice, and all agreed that he would fare better in England than in Virginia. However, he was in love with the daughter of Mr. Leadam, and his finances would not sustain a family, whereas if he embraced the American offer he could marry at once. He consulted his lady love, and she at once assented to his acceptance, whereupon Dunglison entered into a curious covenant with Mr. Gilmer, under which he undertook to teach with due diligence Anatomy, Surgery, the History of the Progress and Theories of Medicine, Physiology, Materia Medica, and Pharmacy at the University of Virginia at a guaranteed salary of $1,500.00 per year plus living quarters (14).

He married Harriett Leadam on the 5th of October, 1824, and 3 weeks later they embarked for Virginia. She proved a fine wife and provided him with a home that was always noted for its sociability. She died on March 5th, 1853, in her 51st year, leaving a daughter and four sons, two of whom became physicians.

When Dunglison left England, the old London Medical Society and the Hunterian Society, of which he was a member from its very foundation, passed resolutions wishing him good luck. At the time he left he was also a member of the Society of Apothecaries, the Royal Humane Society of Lon-

don, and a number of French scientific societies. The young couple arrived at Norfolk, Virginia, February, 1825, and proceeded directly to Charlottesville where the "Old Sachem," Thomas Jefferson, was from the first immensely pleased with the fine professor whom Gilmer had selected. Dunglison impressed Jefferson so favorably that he engaged him as his personal physician and submitted to his regimen without murmuring at "suffering inflicted upon him for remedial purposes" (19). He treated Jefferson for prostatic hypertrophy with urethral obstruction by the passage of bougies of increasing size, which he taught the old man to use on himself. Dunglison also became the intimate friend of James Madison, whom he attended in his last illness. Dunglison had a request to visit Mr. Madison from Baltimore in May, 1834. The ex-President had developed a rash extending all over the body and limbs which caused great suffering especially at night and deprived him of his sleep; Dunglison found him to be very feverish and delirious, with his strength failing rapidly, and considered all this part of a rheumatic affection. Finding it accompanied by febrile movements and finding the patient more or less dyspneic, he "augured unfavorably." Two years later he was again called in consultation, the patient refusing to take any remedies unless prescribed or sanctioned by Dunglison. He found the aged man again laboring under a heat of the skin, with increased quickness of pulse, dyspnea, and a feeling that his end was approaching. Madison died the 28th of June 1836 at the age of 85.

Courtesy of the Philadelphia County Medical Society

ROBLEY DUNGLISON IN HIS LATER LIFE

Dunglison was also consulted medically by Mr. Monroe when that ex-President was at the University of Virginia but apparently only in a cursory capacity.

In the Spring of 1826 Jefferson was attacked by dysentery and failed very rapidly. Dunglison was in constant attendance, but the venerable patient gradually lapsed into coma and died on July 4th, 1826.

Dunglison also attended Jefferson's son-in-law, Governor Randolph, in his last illness, as well as other members of the Jefferson family. During a visit to Washington, D.C., he was also requested to visit General Jackson, then President of the United States, in consultation with his attending physician Dr. Thomas. The Old Warrior, suffering from "pleurodyne," was a great believer in bloodletting. It appeared to Dunglison injudicious at his time of life—he was then nearly 70 years old—to reduce himself so frequently as he did, and he suggested to him that he let up on all this bleeding. With Dr. Thomas he recommended strong counter irritation instead.

In bringing Dunglison to the department of medicine at the University of Virginia, Jefferson had in mind the broad education of the academic student in the history and explanation of all the successive theories of medical sciences—in Anatomy, Materia Medica, and the various ancillary fields of

medicine—that would enable him to judge the extent and the limitations of the medical art. He also desired the student to be given a foundation upon which he could build a super-structure if he so desired, by further study elsewhere, that would prepare him for the practice of medicine. Jefferson recognized both the need for postgraduate instruction and the limitations of receiving such definitive instruction anywhere but in the larger cities of the North. "The classes of people which furnished subjects for the hospitals of Baltimore, Philadelphia, New York and Boston," he said, "did not exist at Richmond or anywhere else. The shipping constantly present at those places furnished many hospital patients, as did the white servants of those cities, which latter class was numerous and penniless and resorted in sickness to the hospitals. In the South, the servants were slaves whose masters were required by law to take care of them in sickness as in health and could not be admitted to hospitals or almshouses." He called the hospital the last resource of poverty, saying it is poverty alone which peoples hospitals.

Jefferson was 82 years old when Dunglison first met him on his arrival in Charlottesville, but his intellectual powers were unshaken by age. The views of Dunglison were greatly influenced by those whom he respected and admired. Contact with so forceful a character as Jefferson was bound to have a decisive effect on his way of thinking, an effect which can be detected easily in his subsequent publications. His repeatedly affirmed views on medical enlightenment and on education of the public as the best means of combatting superstitious practices and medical delusions were undoubtedly greatly influenced by Thomas Jefferson's strong opinions on the values to a Republic of the diffusion of knowledge among the people. "Preach a crusade against ignorance," Jefferson urged his friends. He was also influenced by Jefferson in his views toward moderation in the use of drugs. Jacob Bigelow, of Boston, admired these views as expressed by Dunglison so greatly that he dedicated his book *Nature in Disease* in 1859 to Dunglison. In his memoranda written in 1852 and now in possession of the College of Physicians Library of Philadelphia, Dunglison states: "Mr. Jefferson was considered to have little faith in physic; and has often told me that he would rather trust to the unaided or rather the uninterfered with, efforts of nature than in physicians in general." After his contact with Jefferson Dr. Dunglison's views on the treatment of patients were decidedly different from the heroic treatment evident in his first book on children.

While professors in the French system of medical instruction were not uncommonly full-time men, financially independent of their students, this was not the case in England or America. When Dunglison was offered a guaranteed salary for full-time work, it was an innovation in teaching annals. Living salaries for medical professors in the United States were practically unknown. Ordinarily they received only the fees collected from the students. In addition, it was practically always necessary to augment the income received from teaching by remuneration from private practice. Indeed, much of the desirability of a professorship arose from increased fame and prestige attached thereto which then resulted in profitable practice. Under the rules and regulations laid down by the University of Virginia Dunglison limited his practice to consultations (22). Thus was set the precedent at the University of Virginia for the employment of a full-time medical instructor, a precedent which was slow to take hold in American medical education.

The University of Virginia was opened on March 7th, 1825, with 68 students, twenty of whom took the seven subjects that Dunglison taught (13). He lectured 3 days a week for 2 hours each day during 10 months of the year, this being the first American college to institute the 10 months' medical course. The Visitors were expected to attend and criticize any and all lectures given at the university. Room for anatomical dissection and other kindred purposes was provided. In 1826 a dispensary

was established which was supervised by Dunglison, where, for ½ hour following his lecture, he discussed medical and surgical cases including vaccination. The subjects he covered embraced Physiology, Pathology, Therapeutics, Medical Jurisprudence or Toxicology, and Obstetrics. Arguments in favor of one teacher for all these subjects he gave were that the student would not be distracted by the discordant sentiments of different teachers, and that duplication of such matter was avoided. He emphasized the knowledge of Physiology rather than Anatomy, saying in his lectures "This interesting department of science has of late years acquired a value which it did not previously possess." In 1827 Drs. John P. Emmett and Thomas Johnson were added to the faculty, the former as professor of Natural History, including in his courses Chemistry, Materia Medica, and Pharmacy (4), and Dunglison adding Obstetrics and Medical Jurisprudence to his own labors. In 1827 he published a syllabus of his lectures on Medical Jurisprudence, including in it the treatment of accidental poisonings and of suspended animation. Under this organization the department was considered fully adequate to prepare students for the medical degree, and in July, 1828, the first to take their degrees as Doctors of Medicine stepped up to the rostrum four strong. However, even though the course led to the degree of M.D., it was usual for the students who wished to prepare themselves further for practice to continue their medical studies elsewhere, especially in the schools of Philadelphia, New York, and Baltimore. In 1830 the University of Pennsylvania formally recognized the work of the University of Virginia, and Baltimore and other medical schools soon followed suit.

During the 8 years he was in Virginia Dr. Dunglison set the medical department well on its feet. At the same time he busied himself with considerable writing. The first fruit of his literary career was an *Introduction to the Study of Grecian and Roman Geography*, published in 1829 in association with George Long. In 1829 *The Virginia Literary Museum and Journal of Belles Lettres, Arts and Sciences* was established as a medium for publishing science and history, especially the history of Virginia, as well as literature of a diverse nature for general readers. It lasted one year. He could not get his colleagues to contribute articles.

In 1830, Physiology having been added to the curriculum as an elective at large, he agreed to write a book on the subject, utilizing the text of his lectures to his students. This appeared in 1832 with the title "Human Physiology" and was certainly very successful, succeeding editions being called for in 1836, 1838, 1841, 1844, 1846, 1850, and 1856. The texts of the various Physiologies which had appeared up to the time were culled and freely borrowed from, his avowed purpose being to offer an analytical review of the existing state of the science.

Early in the year 1832, through his friend, Mr. Nicholas P. Trist, who was Private Secretary to President Andrew Jackson, he was invited to participate with Dr. Beaumont in his experiments on the gastric juice (21). He visited Beaumont in Washington D.C. during the winter of 1832–33 and there worked for a time with him on his famous patient, Alexis St. Martin. Beaumont repeatedly referred to Dr. Dunglison in terms of sincere appreciation and respect in his book (3) *Experiments and Observations on the Gastric Juice and the Physiology of Digestion* which then appeared in 1833. But Dunglison was privately chagrined when he felt that his own part in the work of Beaumont was not given sufficient emphasis.

A year after the Physiology, Dunglison published his famous *New Dictionary of Medical Science and Literature*. It was a work of great erudition of which some 55,000 copies were sold during his lifetime and which continued to be republished until 1897 when it reached the 23d edition. First published in two volumes in 1833, it did not prove profitable to the publishers. In 1838 a second edition was brought out which

omitted the biographical and bibliographical parts, as well as the German synonyms for diseases. This great work earned him the nickname of "the walking dictionary" from his friends and students at Charlottesville.

In 1832 while still at the University of Virginia he was elected a member of the American Philosophical Society and in later years served as Secretary and as Vice-President. Upon the death of his friend Peter Stephen DuPonceau, who was President of the Society, he delivered a public discourse in his commemoration.

Dunglison's fame as a teacher and writer while in Virginia spread, and soon he began to receive offers for professorships elsewhere. In 1829 he was invited to Jefferson Medical College in Philadelphia but declined. In 1830 Dr. Daniel Drake, who was organizing the Miami University Medical School in Ohio, invited him to join the proposed faculty, but this too he declined. Again in 1831 he was invited to Jefferson Medical College, but the inducements were not strong enough, so that he declined again. In 1833, his wife's health failing and feeling that a change of climate would be beneficial to her, he accepted the post of Professor of Materia Medica, Therapeutics, Hygiene, and Medical Jurisprudence at the University of Maryland, joining the faculty composed of the Dean, Eli Geddings; Nathan R. Smith, Nathan Potter, Richard W. Hall, and Jules T. Ducatel.

He delivered his first introductory lecture in Baltimore, October 31st, 1833, before a large assemblage of ladies and gentlemen, giving a brief retrospect of the condition of various departments of medicine assigned to him to teach; of the ignorance, credulity, and superstition of the past; and of the immense improvement in modern (that is, his) time. The school in Baltimore, because of various dissensions and because of the insurmountable competition from the attractions of Philadelphia as a center of medical education, did not prosper. It was while at Baltimore that Dunglison first was called the "great peacemaker." Some years later, in 1847, he was introduced to Oliver Wendell Holmes in Philadelphia when Dr. Goddard called out to him as he approached: "Here comes the great peacemaker." It was highly pleasing to Dunglison to hear Weir Mitchell, in a charge to the graduates of Jefferson Medical College in 1850, also speak of him as the great pacificator. While in Baltimore he organized "The Monday Evening Club," planned after the "Wistar Parties" of Philadelphia, which was soon disbanded after he left for Philadelphia.

Before leaving Virginia he had contemplated writing a book on hygiene, and when, at his suggestion, the subject was added for the first time to the duties of his chair in Baltimore, he, after considerable bargaining with his publisher and the delay caused by the financial panic of 1833, brought out his book *Elements of Hygiene* early in 1835. This and his *Medical Student* did not sell well, and second editions were not needed until 1844.

While preparing the *Elements of Hygiene* he also produced in 1836 a work on "General Therapeutics" designed to emphasize the *modus operandi* of remedial agents. This book emphasized his moderation in treatment and modified the heroic practices that generally prevailed in the United States, especially in regard to calomelization. The second edition of his book in 1842 was favorably reviewed by Dr. Joseph Carson, later Professor of Materia Medica at the University of Pennsylvania, thus revealing a friendly spirit obtaining between two members of the two rival schools, for Dunglison always maintained that there was ample space in the city of Philadelphia for two noble institutions. Carson rightly stated that Dunglison was adept at presenting a summary of the precise information possessed upon any subject he handled.

While in Baltimore he also wrote for the *Baltimore Medical and Surgical Journal*, and for the *North American Archives of Medical and Surgical Science*, which succeeded it, and continued as a collaborator of the *American Journal of the Medical Sciences*, furnishing the latter with various reviews and bibliographical notes. He also

collaborated with Sir John Forbes of London, supplying the *British and Foreign Medical Review* with medical material relating to America. In 1844 Dr. Forbes was helpful in obtaining a good English microscope for Dunglison at a cost of eighteen pounds or about $90.00.

In 1836 Drs. Pattison and Revere made specific and definite propositions to Dunglison to join the Jefferson faculty, and Dunglison consented to accept a chair of the Institutes of Medicine and Medical Jurisprudence. The Institutes of Medicine, as explained by Dunglison in his writings, embraced the functions of the body in health, or Physiology proper, with its applications to Pathology, Hygiene, Therapeutics, and Medical Jurisprudence. A course on the Institutes of Medicine was first introduced in the medical curriculum in this country by the University of Pennsylvania in 1791, probably in imitation of a similar course at the University of Edinburgh (15, 20). Leaving Baltimore in September, 1836, he had great misgivings because of the strained feelings between Jefferson Medical College and the University of Pennsylvania, but within a year all the professors of the University of Pennsylvania had called upon him with the exception of Dr. Chapman, with whom Dunglison never had any cordial relations.

The new professor was hailed as a scholar, a profound physician, and an enlightened physiologist of the highest rank, both in this country and in Europe, and as an elegant and popular lecturer who had no superior. The number of medical students in attendance at Jefferson at this time was not exceeded in any other medical school in this country.

He was not long in Philadelphia before he discovered that there was dissension among the members of the faculty of the Jefferson Medical College. There were two factions, and Dunglison, taking a neutral stand, became the tie-breaker; when he determined to be independent of either faction he was disappointing to both. This so-called "Dunglison policy of peace and good will to all," eventually resulted not only in harmony within the Jefferson faculty but served to develop the friendly relationship to the University of Pennsylvania. In 1839, Drs. George McClellan and Samuel Colhoun were dropped from the faculty, and 2 years later Drs. Pattison and Revere of their own volition left, and the final change in the faculty made in 1841 resulted in stabilization and peace at Jefferson Medical College. This new faculty, so carefully engineered by Dunglison, was composed of Dunglison, Huston, Pancoast, Mitchell, Randolph, Mütter, Meigs, and Bache. In arranging this selection Dunglison had made special effort to have the two great seats of clinical teaching, the Philadelphia General Hospital and the Pennsylvania Hospital, represented on the faculty, thus making available for the students a vast amount of clinical teaching material at the two oldest hospitals in the United States (7). He himself, in 1838, obtained the appointment of physician and lecturer on clinical medicine at the Philadelphia General Hospital and for a number of years attracted many students to his public clinics at this ancient American seat of medical learning. Three years later Dunglison exultingly proclaimed the success of his faculty reorganization as measured by the steady increase in the size of the classes. The number of students attracted to a medical school in former years was a measure of its success, and in 3 years Jefferson more than doubled its enrollment. Within 5 years the classes grew so large that the school building had to be enlarged in order to accommodate the hosts of young men attracted to its classrooms.

In 1837 the *American Medical Library and Intelligencer* appeared under the editorship of Dr. Dunglison. This periodical published reprints of standard medical works of recognized value as soon after they appeared as possible, including such classics as Hope on "Diseases of the Heart" as well as the original appearance of Dunglison's "New Remedies."

In 1838 he became interested in the insane poor of Philadelphia, was on committees which drew up appeals for the

establishment of an asylum, and in 1841, when such an asylum was established at Harrisburg, was made one of the trustees. He was also elected a member of the Musical Fund Society of Philadelphia about this time and was an actively working member of the Franklin Institute. In 1844 he was elected a member of the Board of Managers of the Pennsylvania Institution for the Instruction of the Blind and thenceforth devoted much attention and research to printing for the blind. Although he did not object to the Braille system, he favored the use of the normal alphabet in raised letters and published a dictionary in such raised type. There is a copy of his memorial by Peale in this raised type at the College of Physicians of Philadelphia, of which he was a Fellow.

Dunglison was a teacher in all he did. He was a friend to the young, devoted to his students and their interests, being always associated as a pedagogue with the young medical student. His writings were not only widely used as text books by students, but were widely read by the profession and thus also served in a way as a medium of postgraduate education. His house was noted for its sociability. There the science of the day was as frequently a part of the conversation as harmless wit and contagious hilarity. The social qualities of the Doctor were among his most attractive characteristics, and he drew around him the learned men of the day, with whom were welcomed the medical student and the musician.

His views on medical education were widely disseminated in his writings. He favored preliminary education of the student in mathematics, the languages, especially English, and in the sciences, and did not favor preceptorship (12). His enthusiasm inspired his students, and many went on to become teachers in the medical schools in other parts of the country. He staunchly defended the study of the history of medicine and believed it should be given as a course after the student had attended at least one full course of lectures on the various branches of medical sciences, preferably between the first and second years of the 2-year course. His own course of lectures on medical history was published posthumously in 1872.

Physiology was his special delight, and he considered himself a pioneer in the teaching of this subject in this country. As a lecturer he was ready, fluent, lucid, entertaining, and instructive. He held the attention of his class and brooked no whispering, lounging, or disorderly conduct on the part of his students (8, 11). He was a handsome man, of about middle height (17), with curly hair, tending in his later years to portliness.

In the Spring of 1868, to the regret of his colleagues, failing health forced him to resign his chair, and he was promptly made emeritus. The last lecture he ever gave was his annual lecture, the final one of the course every year, on "Death." He died April 1, 1869.

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Medical Education in Trans-Saharan Africa*

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Africa south of the Sahara desert, long relatively dormant except for South Africa and a few coastal areas, has become intensely and increasingly active during the present century. A heavy burden of disease, with periodic devastating epidemics, was probably an important factor in the centuries-long lethargy. The awakening is in part the result of new hope and security contributed by modern medicine and sanitation (2). As far as disease is concerned, much of Africa has become relatively safe if a few rules are followed for the Native African as well as for others. From an estimated fifteen million in the comparatively recent time of Livingstone and Stanley, the population has rapidly increased to about one hundred million today. Ultra-modern cities such as Léopoldville have arisen on land uninhabitable 50 years ago because of disease, especially trypanosomiasis. The medical knowledge and the people that made these advances possible were imported, again with the exception of South Africa.

The recent upsurge of nationalism and the desire for self-government might dim or extinguish the torch of modern medicine before it has become firmly established. This event would be tragic for Africa, not to mention the rest of the world. Reservoirs of infection for yellow fever, malaria, trypanosomiasis, filariasis, yaws, typhoid fever, smallpox, and other diseases are restricted, but they still exist; for leprosy, tuberculosis, dysentery, schistosomiasis, hookworm, and others, they have never been controlled. The African, who never knew the principle of the wheel (2), is being introduced to it in the form of the airplane wheel, missing the ox-cart and other intervening steps. To survive in the era of rapid communication and atomic energy, the African must quickly acquire an immense technology, including that of modern sanitation. Medical education is for Africa of prime importance. Beyond mere survival, moreover, is the problem of active contribution—of creation as well as assimilation.

Any consideration of the present state of medical education in sub-Saharan Africa must take into account other great inherent problems. The immense distances, poor communications, and differences in historical background led to the development of some hundreds (probably over 400) of languages and dialects, so that most Africans cannot communicate with each other or with you. A doctor may be unable to question his patients even though a battery of interpreters is available. The development of regional languages, such as Swahili, has ameliorated but not solved this difficulty. The problem of providing school teachers trained in the local vernacular is enormous. When a Western language, essential for higher education, is taught, it is that of the ruling European power, so that Africans learn variously French, English, Portuguese, Flemish, or Afrikaans, for which there is a dearth of qualified instructors.

The population density is extremely variable, and some people are widely dispersed. In the Belgian Congo, for example, a population of nearly 17,000,000 (6) is distributed

* EDITORIAL NOTE: Dr. Steiner spent 8½ months in nine locations in Africa in 1957, studying cirrhosis and cancer of the liver, on a research grant from the National Cancer Institute. The observations here recorded were incidental to his main studies.

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over an area about 80 times the size of Belgium. Distances from the Mediterranean to the Cape are over 5,000 miles and from the western hump to the Horn over 4,000 miles. The Sahara desert, larger than the United States, acted through the ages as a virtual anatomical barrier equal to the distance from Canada to Mexico in preventing all but the most tenuous intercourse by caravan with the Mediterranean world. Communication was established down the west coast late in the fifteenth century when the Portuguese gradually extended their explorations, but communication with the interior was prevented by disease, by hostility, and by obstructions to navigation on all of the five large river systems. At Makerere College I talked to a student just leaving for home in Tanganyika on vacation. His trip would require 2 weeks and include transportation by lake steamer, bus, bicycle, and foot.

The indigenous population of trans-Saharan Africa has been classified into five or six major racial groups (4). The basis for the classification is chiefly linguistic and cultural, and it represents the efforts of the social rather than the physical anthropologist—a distinct inadequacy for the study of many diseases. The people are "Negroid," but to different degrees. The French and British lands of the west coast, bordering on the Gulf of Guinea and extending north to the Sahara and eastward in a broad belt nearly to the upper Nile, are the home of the true Negro, called Sudanic by the French. Along the Sahara north of this belt, in the Horn, and in Kenya are Hamitic peoples, said to be Sudanics who have become semiticised. South of this belt and extending down the center and east side to the Cape are the congeries of negroid peoples known as the Bantu. They occupy most of central and south Africa. They have in common certain linguistic features, and many have a "cattle" culture. They are said to be hamiticised Negroes. They show a wide range in physical characteristics, and it is my impression that the term "Bantu" has little meaning in terms of physical anthropology and medicine. In southwest Africa are remnants of the Khoisan peoples, including the Bushmen and the Hottentots. At scattered points in the interior, chiefly in the Congo, are small numbers of Negrillos, or pygmies. Finally, in the upper Nile valley and adjacent countries are scattered groups of Nilotics, the tall stork-like peoples. It appears that little is yet known about the comparative inherent biology and psychology of these ethnic groups. The west coast, from the mouths of the Congo to the Senegal rivers, is of special interest to an American because it was the principal ancestral home of the American Negro.

These racial groups are divided into hundreds or thousands of tribes. The family is weak, and the tribe is the important social unit. Tribal law and social organization are still strong influences in many places outside of cities. A striking recent social phenemenon is the migration of great numbers of people to the cities in search of work. The readjustment necessary for this important move includes the major reorientation known as "detribalization." Tribal influence, regulation, customs, and law are suddenly inoperative, and the individual must acquire a new way of life including new customs, laws, ethics, morals, and manner of living, including a cash economy. He may have to relinquish polygamy. In large peri-urban centers large numbers of people must suddenly be provided for and educated. It is on such a background that medical education in some countries must build, even though there is a more highly developed nucleus.

Politically trans-Saharan Africa is chiefly controlled by European powers, France having the largest area. Great Britain, Portugal, and Belgium have sizeable holdings, and Spain only a small segment. The Union of South Africa is independent, although still a member of the British Commonwealth, as is Ghana. Liberia is a small independent country. To this category French Guinea was added in October, 1958. Several protectorates, notably Nigeria and Uganda, are slated for self-government as

soon as the transfer can be arranged, probably 1960 for Nigeria. The territories lost by Germany in World War I were mandated by the League of Nations and the United Nations to Great Britain (Tanganyika, British Cameroons), to France (Togoland, French Cameroons), and to Belgium (Ruanda-Urundi). The status of South West Africa, mandated to the Union of South Africa, is confused, that country now claiming this area as its fifth province. The different parts of Africa show the influence of these European relationships in many ways. Their language, forms of government and education, social and cultural orientation, economic development, and religion have all been influenced. The imprint of these countries on the forms of medical education and practice is clearly legible. The most obvious cultural influences of the United States are soft drinks, Hollywood, and motor cars; more laudable are the educational and medical influences of missionaries.

Except in the European populations in the few large metropolitan centers, the medical problems in Africa south of the Sahara are chiefly the infectious diseases. As these diseases are brought under control, the populations will become older, and the pattern of disease will no doubt become more like that in Western countries. With respect to some of the infectious diseases, the problem of control is that of utilizing existing knowledge. This, in turn, depends on adequate trained personnel, funds, public education, and other support. Examples of diseases which, in theory, could now be controlled or eliminated are yellow fever, malaria, yaws, leprosy, tuberculosis, trypanosomiasis, and filariasis, and this has already occurred on large tracts of the continent. Diseases more difficult to control are ankylostomiasis, tropical ulcer, and schistosomiasis. Malnutrition has attracted much attention chiefly because of the peculiar nature of one of its most spectacular forms, namely, kwashiorkor. The overt manifestations of malnutrition are seen chiefly in the new, overcrowded peri-urban centers. Only further investigation will disclose the position of malnutrition in the spectrum of diseases, but it may prove to have been overemphasized.

The medical problems are still large in some places, both in practice and research. Practice is still in the "heroic" stage in many places. To meet the most urgent needs some of the countries have trained and used medical aides in the rural health systems. Medical, economic, and educational probems sometimes are so closely related as to seem to merge, and they may be worsened or ameliorated by political factors. The problem of malnutrition, for example, is one of agricultural, social, and dietary education in some places, and of economics in others, rather than one of medicine. Certain types of animal proteins cannot be produced in some parts of Africa until, by research, certain diseases of animals have been overcome or disease-resistant strains developed.

The greatest needs in medical education in most parts of Africa are adequate numbers of qualified students and funds to maintain the students, faculties, and the teaching plants. There are also serious problems in faculty recruitment which, in some places, seem unnecessarily made worse by the impetuous rush of nationalism. The number of medical schools also needs to be greatly increased. But education in modern medicine requires a sound foundation in the biological and physical sciences. The recruitment and preparation of medical students are thus tied up with education in general and with the level of economic development which supports it. There are no philanthropists and few sources of tax funds in undeveloped countries, and new schools have no body of established alumni to make donations. In most parts of Africa the universities must provide housing for faculty as well as for students, no suitable homes being otherwise available. In many places most or all of the costs of living as well as of education must be borne by the school system and university. The mission schools are still an important part of many educational systems just as in the beginning, three-quarters of a century ago, they were often the initiating

impetus. In most countries the mission schools and hospitals are integrated into the national educational and medical systems, and thus advantage is taken of some outside aid. In return, some of these agencies receive state aid per patient or student which, while it may be small, is welcome.

It should be emphasized that the economic factor is important. The persons financially able to contribute significantly to medical education and services are numbered in the thousands in some countries, whereas those to whom such services must be provided run into millions. The development of additional and sufficient medical schools will depend on the general economic development of the country, except if they are supported by outside funds. The general economic development, in turn, cannot go on without additional experts in engineering and agriculture, and these people cannot be successful unless the country is reasonably healthy and safe. The advances in sanitation have permitted great increases in population so that in some places there is talk of overpopulation. There are brains and hands eager to be trained.

One of the fine chapters in the history of medical progress has been written in sub-Saharan Africa where many physicians often under considerable difficulties have found time to do research in addition to their practice. This research has benefited not only Africa but other parts of the world. At the same time Africa provides some unique opportunities for studying diseases and peoples under conditions different from those elsewhere.

In this immense trans-Saharan area and supplying a population of about 100,000,000 are ten medical schools. In the past most of the doctors have come from the various European powers concerned, so that the number of schools is not a measure of the quality of the available medical service. Four of these schools are so new as to have no medical graduates. A brief description of each of the ten schools with comments on some of the special problems follows. The general plan will be to start in the southern end of the continent and work north and west. This plan has no connotation except that of convenience.

UNION OF SOUTH AFRICA

The Union of South Africa is a large country with a temperate to subtropical climate. Most of it lies on a high plateau (the "highveld") which has a low annual rainfall so that some of it is semi-arid or even desert. Along the ocean is a green, fertile belt (the "lowveld"). South Africa is the most highly developed of the trans-Saharan areas. Here the European has been in continuous residence since the middle of the seventeenth century. The history of this country is complex and not suitable for brief analysis (1, 2). The present (1957) population is said to consist of 2,975,000 Europeans, 9,640,000 Natives, 431,000 Asiatics, and 1,319,000 Coloureds.[1] The proportion of Europeans (about 20 per cent) is higher than in any other trans-Saharan country. The country is bilingual, using English and Afrikaans, but many native languages persist. The current cultural division of the European population of South Africa into two camps is one of the sad chapters in human relations. Although there are undeveloped native areas, much of the country is modern, with an economy centered around agriculture, mining, and industry. The system of higher education includes a number of colleges, universities, and technical colleges.

Five medical schools or faculties of medicine, all connected with universities, exist in this country. The oldest medical school, founded in 1918, is that of the University of Cape Town, and the youngest, started in 1955 at Stellenbosch University, Stellenbosch, Cape Province, is just getting under way. The other schools were founded at the University of the Witwatersrand at Johannesburg (1922), the University of Pretoria (1943), and the University of

[1] The Coloureds are a new ethnic group with varying Negroid, Caucasoid, and sometimes Mongoloid (including Malay) components, developed during the past two centuries. They are especially numerous in the Cape province.

Natal, at Durban (1951). The language of instruction is Afrikaans at Pretoria and Stellenbosch and English at the other three schools. The course of instruction is 6 years, of which approximately 1 is pre-medical, 2 are pre-clinical, and 3 are clinical; at Durban the course is 7 years. Promotion is by examination, and some of the examiners are external. The annual number of graduates is given (9) as 100 at Cape Town, 87 at Durban, 116 at Witwatersrand, and 61 at Pretoria. The graduates receive the degrees of Bachelor of Medicine and Bachelor of Surgery (M.B , B.Ch.) and have a 1-year internship before practicing. After the internship the graduates are eligible for registration in the Commonwealth list of the British Register, such registration conferring the same privileges as registration in the British list (9). Although there are residency positions in some hospitals, most candidates for specialty training go abroad, chiefly to Great Britain. A number of pathologists have been trained at the South African Institute for Medical Research in Johannesburg, which provides services in pathology as well as performing research, and other specialty training is available.

The universities receive state aid, and they have other sources of income. Non-European medical students have been admitted to the medical schools at Johannesburg, Cape Town, and Durban. The admission policies of the Universities of Cape Town and the Witwatersrand must now be reconsidered in the light of the new national legislation, and the future is not clear.

My personal observations were limited to the Universities of Cape Town and the Witwatersrand. In 3 weeks spent in the pathology department at the former, and over 2 months at the latter and the adjoining South African Institute for Medical Research, I mixed with faculty and students. The impression was one of high standards, medical ideals, and competence. The intellectual atmosphere resembled that of the schools in this country. The libraries were good, and the medical perspective was world-wide.

University of Cape Town.—The University of Cape Town, as founded in 1918, included a Faculty of Medicine. Its predecessor, the South African College, had given courses in some preclinical medical subjects since 1903. The first graduates qualified in 1922. Over 150 students, selected from about twice that number of applicants, are admitted each year to the 6-year course, and about 100 eventually graduate and, after a compulsory intern year, become registered. The faculty includes salaried members who are not permitted private practice. Since 1951 this number has increased, resulting, it is said, in improved teaching and better research output. Post-graduate specialty training is now given in Surgery, Medicine, Radiology, Pathology, and other specialties. About 10 per cent of each class has been coloured students. Native Africans have not been accepted because of lack of clinical teaching facilities for them, but they are admitted to the University of the Witwatersrand. The present government, which controls hospital policies and the purse-strings of the university, seems determined to prevent non-Europeans being admitted to the university. They will probably be restricted to the new school at Durban.

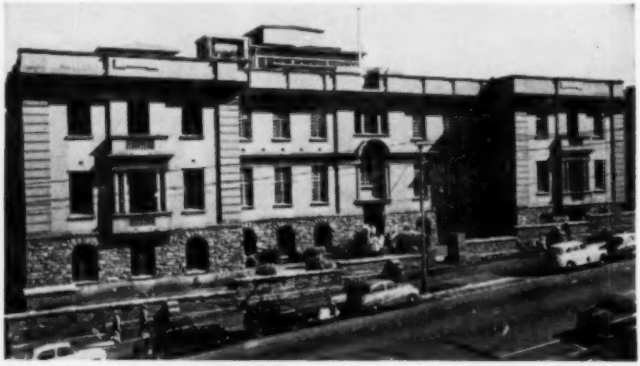
The medical students at the University of Cape Town seemed extraordinarily responsible, and, like those at the University of Witwatersrand, they have a strong student organization. It appears that student organizations can be stronger where the medical course is 6 years long than where it is 4 years, as in the American system, because of the longer continuity of interest and responsibility of the individual students. For example, the students at Cape Town have organized and operated a clinic since 1942 for Cape Coloureds in one of the underprivileged suburbs. This clinic has afternoon and evening hours and is attended by about 4,500 patients yearly. Students from the third to the sixth years operate the clinic under supervision of members of the teaching staff. Nutrition and hygiene are emphasized, as well as medical therapy, and the student is taught to consider the patient as part of a

family unit. A student may be assigned a family for total health and social services, care and education. The student gets experience in general family and community practice.

University of the Witwatersrand.—This medical school came into existence with the chartering of the University in 1922, although some preclinical medical subjects had been taught since 1919 (8). The University had been preceded by the South African School of Mines and Technology and by the University College, Johannesburg. The formal impetus to start a medical school in the Transvaal Province came from a meeting of registered medical practitioners called by the Council of the Witwatersrand Branch of the British Medical Association in April, 1916 (8). The present medical school building (Fig. 1) was first used in 1920, although it did not reach its present form until some years later. Clinical instruction is carried out at nearby hospitals run by the government. The first class of four graduates got degrees in 1924. In recent years the number of graduates has ranged from 116 in 1954 to 85 in 1955. The number of undergraduate students registered in the six classes for the M.B., B.Ch. course on May 1, 1958, was 580. Of these, 507 were Europeans, and 73 were non-Europeans. The registered non-Europeans could be subclassified as 29 Africans, 4 Coloureds, 8 Chinese, and 32 Indians. The apartheid policy of the present government extends to eventual separation in education, and they have announced that they will provide separate university facilities for non-Europeans. Reaction in the University, as at Cape Town, and by the public was sharp, and the future is uncertain.

This medical school has a strong alumni organization which helps the medical students publish a medical monthly periodical, *The Leech*, now in its 27th volume. The University publishes the excellent *South African Journal of Medical Sciences*. A strong student's organization annually organizes a week-long conference on some special subject, with national and international speakers. In 1957 the symposium was on "The Liver and Its Reactions in Africa" (3).

The medical student graduates with the degree Bachelor of Medicine, Bachelor of Surgery (M.B., B.Ch.). Subsequently he may elect to try to earn the degree of Doctor of Medicine (M.D.) or Master of Surgery (Ch.M.), both requiring a thesis. The faculty of medicine also awards post-graduate diplomas in many specialties as, for ex-



Photograph courtesy of Prof. B. J. P. Becker

FIG. 1.—Medical school of the University of the Witwatersrand in Johannesburg, South Africa. This building is located several miles from the university campus but near the large hospitals used for teaching and adjacent to the South African Institute for Medical Research.

ample, the Diploma in Medicine (Dip. Med.).

A number of institutions besides the universities provide opportunities for advanced training and for research in South Africa. The South African Institute for Medical Research (SAIMR) at Johannesburg gives medical laboratory service on a fee basis and performs research, giving training in both. The Council for Scientific and Industrial Research (CSIR) supports scientific research, including some in the health sciences, on both intra- and extra-mural bases. It has both governmental and private financial support. The Poliomyelitis Foundation at Johannesburg supports investigations on viruses. The National Cancer Society of South Africa allocates grants for research from funds raised by popular subscription.

With five medical schools for a population of about 14,000,000, South Africa would appear to be adequately provided with medical educational facilities. A common complaint was of the inadequate means for advanced study in other countries. Most of those who go abroad go to Great Britain, but support at the scholarship level is said to be insufficient. The ethnic distribution of the population must be considered in judging the adequacy of the medical educational plant. The population economically capable of materially contributing to medical education through taxation or gifts is around 4 million, whereas the population needing medical service is 14 million. Considered in this light, five medical schools present a sizeable burden and should be adequate for present needs as well as for future increases in the population.

BELGIAN CONGO

In this large central African country astride the equator two new medical schools are just getting under way. Up to now most of the doctors came from Belgium or as medical missionaries from other countries as well. At Léopoldville, the capitol, in the lower Congo basin is the Faculté de Médecine de l'Université Louvanium (1954), and at Elisabethville, about 1,000 miles away in the eastern highlands of the Katanga province, is the Faculté de Médecine de l'Université officielle d'Elisabethville (1956). Both schools receive some state aid (9). The students are African natives and the instruction is in French.

In 1956, I spent about a week at the new University Louvanium. Built on the bluffs of the Congo river in an attractive location some 15 kilometers from the city, the plant consists of new modern buildings and housing on the campus for the faculty and students. A large hospital was then under construction for the medical school. The prior development of the science and other university faculties was essential to provide qualified medical students.

The present population of the Congo, a colony, and of Ruanda-Urundi, mandated by the League of Nations and with trusteeship status under the United Nations, is nearly 17,000,000. Modern cities are surrounded by large areas of undeveloped country, some of it scantily populated and by people with no concept of modern sanitation and hygiene. The country is many times the size of Belgium, about as large as the United States east of the Mississippi, and it had formidable disease problems. Through an efficient health service, organized by provinces and districts to include all physicians whether in state, missionary, mining, plantation, or private practice, the major epidemic diseases have been brought under reasonable control. Every doctor must be qualified to practice medicine in Belgium and in addition, be especially certified in tropical medicine. The entire medical profession bears the healthy imprint of the Institute of Tropical Medicine at Antwerp. A system of medical laboratories, one for each of the six provinces, performs laboratory tests for all doctors on request, and helps in the control of communicable diseases. Such a closely integrated laboratory and medical system is important in a land where foci of yellow fever and other communicable diseases exist which must be quickly recognized on outbreak. In a month

spent at one of these provincial laboratories (at Stanleyville), I had an opportunity to study the pathological collection of liver diseases. It could be equaled in few places in the world because of the great frequency with which viscerotomy is performed by the physicians throughout the province on patients who had jaundice to exclude the diagnosis of yellow fever. This laboratory, housed in a new modern building (Fig. 2), performs a great service, even though specimens arrive sometimes from hundreds of miles away. This Congolese laboratory system must be considered an educational as well as a service operation. The periodical, *Annales de la Société Belge de Médecine Tropicale*, publishes many of the medical contributions emanating from the Congo, and it is an important educational and unifying influence.

Photograph courtesy of Dr. Gh. Courtois, Medical Director

FIG. 2.—Laboratoire Médical Provincial at Stanleyville, Belgian Congo. Dedicated in September, 1957, with an international conference on Virus Diseases in Africa. Medical laboratories for research and service are found in each of the six provinces.

A number of research and service organizations in the Congo interested in disease, nutrition, agriculture, microbiology, and related problems contribute also to medical education at the postgraduate level. The Institut Médicale Tropicale Princesse Astrid at Léopoldville has had an important role in research and control of the communicable diseases. FOMULAC (Foundation Médicale de l'Université de Louvain au Congo) supports hospitals and research in the eastern Congo. IRSAC (Institut pour la Recherche Scientifique en Afrique Centrale) has laboratories on Lake Kivu for many sciences, including nutrition.

At a symposium on "Virus Diseases in Africa" held in Stanleyville in September, 1957, at the dedication of the new provincial medical laboratory, attended by international authorities, the point was made that many viruses exist in Africa apart from those that cause epidemics of disease, that some of these agents are known to be pathogenic for man while others are still "in search of a disease," and that, as the more spectacular pathogens are controlled, the less spectacular ones will become more conspicuous (5).

BRITISH EAST AFRICA

In east-central Africa, on the north shore of Lake Victora and bordering on the eastern limits of the Congo, is the British protecto-

rate of Uganda. It appears as a tiny speck on political maps of Africa, despite which its size about equals Ohio, Indiana, and Illinois combined. The population is about 5,000,000 natives, chiefly of Bantu, Hamitic, and Nilotic stocks, 60,000 Asiatics, and 5,000 Europeans. Although Uganda straddles the equator, the climate is excellent because of the altitude of nearly 4,000 feet. In the largest city, Kampala, is the Faculty of Medicine of Makerere College, now officially designated the "University College of East Africa." This university is an autonomous institution, having state aid. It now serves the colony of Kenya and the mandated country of Tanganyika as well as Uganda. Thus the university in actuality serves a population of nearly 20,000,000. These three countries, together with Zanzibar, collectively comprise British East Africa.

The medical school was founded in 1924. It has steadily improved its standards until now the course of 7 years consists of 2 premedical, 2 pre-clinical, and 3 clinical years. The annual number of graduates has been small—six, according to the last report (9). However, the growth of the College has now reached the point where more students qualified for medical school are becoming available so that, in 1957, 29 were admitted. A larger medical building is now being built, and new buildings for the teaching hospital, Mulago Hospital, are under construction. About the time this is published the school should be housed in a new modern plant with a capacity of about 40 students per class.

The university students live in residence halls, modeled on the British system, on the University campus about a mile away from the medical school. The medical school is open to all qualified students regardless of sex, race, color, or religion. Most of them are Africans, but a few are Asiatics. Instruction is in English by a medical faculty of Europeans and Africans. External examiners supplement internal examiners, and the graduate receives the diploma of Licentiate in Medicine and Surgery (East Africa) or "L.M.S. (E.A.)." After an internship and 5 years of compulsory governmental service the new physician may remain in the government service or enter private practice in any of the British East African territories. The government service is required because all educational expenses are paid by the government. It is hoped that graduates will soon be recognized by the General Medical Council of the United Kingdom.

The capitol of Uganda is Entebbe, beautifully located on the shores of Lake Victoria about 21 miles from Kampala. Here is the famous Virus Laboratory. In Uganda and Kenya are a number of technical and teacher-training schools.

There are no medical schools in Kenya or Tanganyika, so that the population (about 20,000,000) and territory in the three parts of British East Africa that are largely dependent on Makerere are immense. This part of Africa was the center of the great epidemic of trypanosomiasis in the first decade of this century. This disease is now under control (although parts of the country are still out of bounds), as are the other epidemic diseases. However, infectious diseases of many kinds still prevail, as do other poorly understood diseases prevalent among the Africans. The balance in the curriculum has been adjusted to these peculiar needs.

Between British East Africa and the Union of South Africa lies British Central Africa, composed of Northern Rhodesia, Southern Rhodesia, and Nyasaland. These large countries have no medical school, although it is said that one will be started at the newly opened university at Salsbury in Southern Rhodesia. Bechuanaland, a large but poorly populated and semi-arid country, Basutoland, a mountainous enclave in South Africa, and Swaziland are British protectorates to which medical services must be provided. Mozambique on the east coast and Angola on the west are large Portuguese territories with no indigenous medical educational system. At Khartoum far to the north of Uganda is a medical school in the Nile valley of the Sudan. This country is not properly a part of trans-Saharan Africa.

NIGERIA

In Nigeria, in British West Africa, a new medical school was founded by the University College of Nigeria, at Ibadan, in 1948 (9) and opened to students in 1950. The first students had to go to various British schools to get the 3 years of clinical training. In 1957 a new hospital was opened, and students will now be able to take their entire medical course at Ibadan. Twenty-one students were admitted to the first clinical year. This teaching hospital is one of the most impressive buildings in Africa (Fig. 3). It is truly designed for the tropical climate, which here can be trying. The University College is privately controlled, but it receives state aid. It is in special relationship with the University of London, which is represented on the committees appointing staff and participates in the examination of students. The medical school has a mixed European and African faculty and an African student body. The number of pre-medical students is limited by laboratory space at the College. Eventually, it is hoped, the training capacity of the hospital of fifty students per class in each of the three clinical years will be reached. The degree awarded the medical graduate will be the M.B., B.S. of London University.

Photograph courtesy of Dean Beatrice Joly

FIG. 3.—New medical building and hospital of the University College, Ibadan, Nigeria. Opened in 1957, this building is one of the finest in Africa. It is located in the outskirts of the old African city of half a million people.

Ibadan is an old Native city of half a million. Exclusive of the medical faculty, which came there recently, it is said to have only twelve practicing physicians. It is located about 80 miles in the interior from Lagos, the seaport, also a city of half a million. Nigeria has a population of about 35,000,000 and many health problems. Its coastal tropical rain forest grades off into semi-arid country in the north, with an expected corresponding change in the spectrum of diseases. In 2,000 consecutive autopsies that I reviewed at the General Hospital, Lagos, only 11 per cent of the subjects had reached the age of 50 years or more. Nigeria, a protectorate, is divided into three large districts, which have a high degree of autonomy, largely, it is said, for ethnic reasons. It would seem that each district should eventually have a medical school. Whether these will be hastened or delayed by the advent of self-government, now scheduled for 1960, remains to be seen. There is a Federal medical laboratory service whose main unit is in Lagos. This laboratory is of special interest in the United States because of the studies in yellow fever that were conducted there several decades ago.

Ghana, the former Gold Coast, which

recently acquired self-government, lies on the Guinea coast west of Nigeria, from which it is separated by the French territory of Dahomey and the protectorate of Togoland. It has a university at Accra, which I did not visit, but no medical school.

FRENCH WEST AFRICA

The French territories in trans-Saharan Africa are larger than those of any other country, and they exceed the size of metropolitan France manyfold. The largest governmental units are French West Africa and French Equatorial Africa. Together they comprise about 7,500,000 square kilometers. From the west coast eastward French West Africa alone extends about 3,000 miles, and its 15,000,000 people speak about 160 languages and dialects. The indigenous people are mainly true Negroes (or Sudanics) and Hamites. They are divided into innumerable tribes. In some places the majority are Moslems. Most areas are poorly developed.

The educational problem due to large size, ethnic diversity, and economic underdevelopment is enormous. For this immense area there is only one medical school. Another school is in operation on the east coast island of Madagascar, controlled by France, but it is not a part of this survey.

At Dakar in the Sénégal on the western hump of Africa is the only medical school in French West Africa (9). This school is designated the École préparatoire de Médecine et de Pharmacie, Institut des Hautes Études. It is owned by the government, but, like other French universities, it has a certain degree of independence. The course is 6 years, exclusive of a 1-year pre-medical course. Part of the clinical training is now taken in France, but it will soon become available in Dakar. The same standards are maintained as in France. The annual admissions have been about 22 students, but an expansion is planned as additional hospital teaching facilities become available. The students are native Africans. The school is housed in a modern new building. Young Africans are being trained for faculty positions. This school supports much research, the departments of medicine and pediatrics being especially active.

Also located in Dakar is an excellent Pasteur Institute. It provides the services of a medical laboratory, prepares vaccines and biologicals, and supports research. An institute for studies in nutrition has carried out extensive investigations on the needs and availability of various foodstuffs in this large country with a diversified soil and climate.

RÉSUMÉ

An attempt has here been made to present the current state of medical education in trans-Saharan Africa, its special problems, and its outlook for the future. The Union of South Africa with five medical schools is the most developed. Schools are also in operation at Dakar, Ibadan, Léopoldville, Elisabethville, and Kampala. Other schools are in the planning stage, but the number is inadequate for the total population of about 100,000,000. Big problems are the dearth of adequately prepared students (except in South Africa), financial support, libraries, and opportunities for post-graduate training. Medical education in underdeveloped countries cannot be divorced from general education and other professional and technical training such as engineering and agriculture. All are dependent on general economic advancement, and in the early stages medical schools may require outside aid.

ACKNOWLEDGMENTS

These observations were aided by a research grant from the National Cancer Institute (C-3251). Professor J. G. Thomson and Dr. G. Selzer of the University of Cape Town provided valuable information, as has Professor B. J. P. Becker of the University of the Witwatersrand, who also provided Figure 1. Dean Beatrice Joly kindly provided Figure 3, and much information on University College, Ibadan, Nigeria. The views expressed are my own and do not necessarily reflect those of any of my informants in Africa.

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The "Broadcast Demonstration" in the Physiology Laboratory*

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The often quoted dictum that education consists of "Mark Hopkins at one end of a log and a student at the other" retains a very special validity in medicine, where small classes, relatively large numbers of teachers, and the frequent occasions for discussion in small groups maintain much of the value of the apprenticeship that once constituted such a large part of medical teaching.

In the clinical subjects the bedside is in a very real way the "log" connecting teacher and student. Here in the contact with immediate reality is established the common interest upon which the whole of the rest of the educational superstructure is erected, and by which its ultimate effectiveness must be judged. It focuses attention upon the "individuality" of disease, pointing out instructive variations in its natural history. It is spontaneous and non-contrived, and the problems which arise are those which will later be presented to the student in his own practice; in effect, the student learns at the very site of his ultimate occupation. Above all, it is a natural exercise in problem-solving; emphasis is not alone upon "answers" but upon the methods of arriving at them. Finally, the patient's very presence demands that the student be not satisfied with an academic "answer," or even a thorough and genuine understanding of the situation. That understanding must culminate in an effective action, be it surgical, chemotherapeutic, or whatever else may be necessary to restore the patient. This requirement for a crucial intervention is indeed central to the responsibility of the physician; it calls for the development of initiative and responsibility, and it requires that one of the goals of instruction must be to transfer initiative progressively from the teacher to the student.

In Physiology the laboratory is the educational equivalent of the bedside. It is, of course, where physiologists themselves center their professional lives. Their own research problems arise in the natural occurrences in the laboratory, and the experiment is the testing point of theory much as the therapeutic trial is the final test of the physician's understanding of his patient. It is obvious, then, that it is as natural to make the laboratory the center of teaching in Physiology as it has been wise to make the bedside the center of clinical teaching.

It became amply apparent to us, as the implications of this philosophy were more and more fully faced, that the student laboratory of physiology, as it has existed, offered hardly more than the rudiments of its true potentialities. It was our decision to meet this problem directly by a program that has involved three basic lines of development: (*a*) an instrumentation program, resulting in the development of the "Physiograph," already reported in this journal (1); (*b*) the development of an adequate physical environment, employing the fullest range of

* We are indebted to the Commonwealth Fund for a grant to install the television and communication network; a group of Houston businessmen for funds to remodel the laboratory; and the Heart Institute, National Institutes of Health (H-1757), for supporting the development of the Physiograph.

educational aids, with an extensive system of intercommunication; (*c*) the development of a teaching program as the progress in (*a*) and (*b*) make it more and more possible to approach the goals that were our starting point. This report describes the design and development of the laboratory and illustrates the versatility of the new facilities by examples of what may be termed "broadcast demonstrations."

THE LABORATORY

The laboratory has traditionally been the place where nature speaks directly to the student, and for over 100 years this philosophy has motivated the operation of the student laboratory. While it is equally traditional that, to the good worker, surroundings are of secondary importance, there is no doubt that efficiency is improved by an appropriate environment; there are indeed areas in which common sense alone dictates certain minimum standards. These mainly concern elimination of crowding and clutter, suppression of noise and interference, and the provision of illumination appropriate in intensity and quality, ample desk, drawer, and cupboard space, and an adequate means of communication.

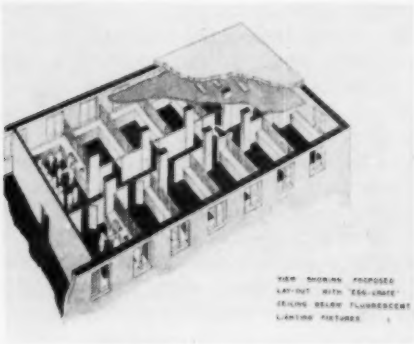

FIG. 1.—Architect's drawing of the new laboratory.

Many of the difficulties mentioned above arise from the large open laboratory space in which many students work in closely packed groups around the experimental subject, with the unavoidable distractions of noise, reverberation, conversation, visiting, and other traffic, and the resultant inevitable inattention to the experiment. It therefore appeared to us as indeed it has to others, that if the total laboratory space available (50 × 100 ft.) were divided into ten small group laboratories (each 18 × 14 ft.), many of the above difficulties would naturally be eliminated, while if the same number of students were dispersed around the periphery of the individual laboratory rooms, lined with desk top cabinets, each student would have an adequate writing and working space, and crowding would be reduced to a minimum.

We wished, in addition, to foster the concept of the laboratory as a place where the student can come at any time for experiment and study at permanently assigned quarters, giving identity and fostering proprietorship. Figure 1, an artist's sketch, shows the general floor plan of the laboratory. In addition to the ten student laboratories, each housing two groups of four students, there are two other rooms. One is a demonstration theater seating twenty and the other a human studies room. All rooms are highly illuminated by recessed starterless daylight fluorescent tubes, eight in number, running the length of the room in two banks, providing an average ambient light-level on the working surface of approximately 200 foot-candles. In addition, in all ten student laboratories two incandescent spotlights are ceiling-mounted over each operating table to provide additional illumination of proper color balance for fine work on living tissues.

Along three walls of each of the student laboratories were placed green formica-topped cabinets into which the Physiographs were flush-mounted. The cabinets also contain flush-mounted stainless-steel sinks. At the sinks are compressed air and gas outlets, in addition to the hot and cold water faucets. The furniture arrangement and cabinet space resemble that of a modern efficient kitchen. Individual desk and drawer space is provided for each student.

The ceiling is of sound-absorbing material, and the existing air-conditioning system was modified for better distribution of the temperature and humidity-controlled air. Along both side walls of each room, extending almost from the ceiling to the bench top are fluted translucent windows to allow passage of light without direct vision, creating the impression of height and width while retaining privacy. Each room retains an outside window. The color scheme is a restful two-tone green with a maroon floor and a pearl grey acoustic ceiling. Figure 2 illustrates one of the twenty student stations.

The human studies room has much the same cabinet arrangement, furniture, lighting, and facilities as the other laboratories. Here there is a single Physiograph and a bed instead of an animal operating table. In this room the students can carry out studies involving measurements on humans. The finish of this room is a pastel buff with the same floor and ceiling as in the other rooms.

The demonstration theatre, Figure 3, has two rows of raised upholstered theater seats. In the center there is a cabinet holding the demonstration Physiograph, and beside it is the animal operating table. Behind these is a blackboard. The color scheme and lighting are the same as in the individual student laboratories.

Observation of the operation of the group laboratory system in other institutions suggested strongly that the isolation created by this system can be carried too far. Three features of the present system help to achieve what we consider to be a proper balance between isolation and class identity; the use of semi-opaque glass in the partitions, the doorless openings onto the central common corridor, and the communication system to be described below.

COMMUNICATION SYSTEM

In the laboratory, the student requires three kinds of assistance. First, he needs professional help—advice in gaining access to the phenomenon under study, supervision in a difficult preparation, or rescue from a precarious situation. Discussion of results and their meaning is an essential part of professional help. Second, the student requires supplies such as animals, drugs, and the other expendables associated with a particular experiment. Third, he requires technical assistance; early in the course he may need help setting up apparatus or in the use of equipment. More often, as an experiment progresses, he requires additional instrumental facilities to track down various components of the phenomenon under investigation.

Based on these considerations, facilities have been created to enable the medical student to summon appropriate help when desired and to maintain contact with instructors, assistants, and other students.

The facilities to achieve these goals have been centered at each of the twenty student stations. Each station, in addition to its Physiograph and surgical operating area, is equipped with a console at which all of these facilities, including the demonstration equipment to be described, are concentrated.

On the left-hand side of the console, at each station, as can be seen in Figure 2, is a row of three push buttons, each monitored by a colored light—red for instructor, yellow for laboratory supply, and green for technical assistance. When the student presses any button the appropriate light on his own console flashes, and over the door of his laboratory room a flashing light signals the type of assistance needed. In addition to the lights appearing at each room, the system extends to stations where demonstrators congregate, the laboratory supply room, the shop, the demonstration room, and the offices of all personnel having laboratory responsibilities. Coded audible signals accompany the flashing lights For example, if a professional call is placed, a soft gong is sounded in the corridor alerting instructors that one of them is needed. A glance down the hall shows the room in need of assistance. If a call is placed for supplies, a yellow light flashes in the laboratory supply room, and a buzzer tone signals that help of this kind is needed. In the shop, a green light

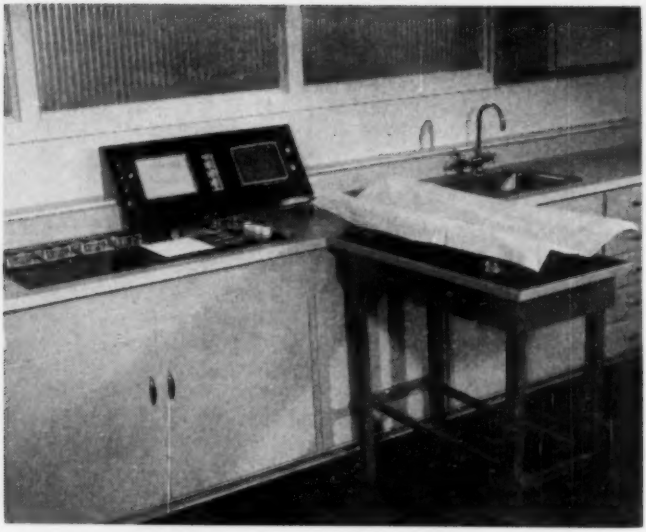

FIG. 2.—One of the twenty stations

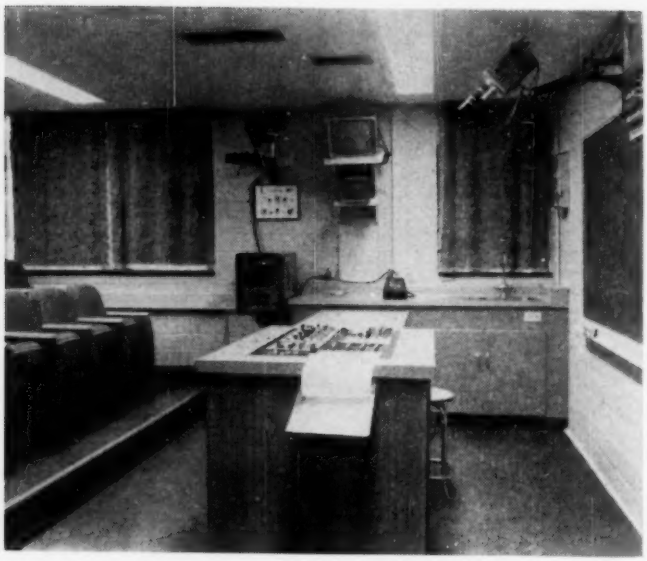

FIG. 3.—The demonstration theater

flashes, and a buzzer indicates that technical assistance is being requested. Any of the personnel summoned may proceed directly to the station calling for assistance or answer the call over the intercommunication system. The responsibility for canceling a call resides with the person answering the call, and no call can be canceled without releasing the push button originally pressed.

To the right of the annunciator push buttons is the intercommunication loudspeaker-microphone. To the left and below the loudspeaker is the intercom switch which is normally (spring-return) in the listen position. All twenty stations, the demonstrator's station, the demonstration room, laboratory supply, shop, and all offices are normally in the "listen" position, and no eavesdropping is possible under any circumstances. A call placed from any one of the stations goes to all stations. Normally, low-level background music is heard over the intercom, and any call placed cancels the background music.

THE BROADCAST DEMONSTRATION

The demonstration is an exercise in communication; it provides an essential element of reality and immediacy, with large potential gains. It is often required to exhibit events which, because of expense, complicated apparatus, or difficult surgery, cannot readily be made available to small groups; it is also valuable as an introduction to certain more difficult experiments. There are, however, certain important criteria which must be satisfied; the most important of which is that everyone must see, hear, or otherwise experience the demonstration with a resolution equal to that presented to the demonstrator himself. That the demonstration must work need not be labored. Finally, the phenomenon must be displayed in as many ways as possible to exploit the full sensory scope of the event.

Many of the most successful demonstrations suffer because of inadequate vision. Here is where television is at its best, for by proper light and lenses each individual student can have a direct over-the-shoulder view of the demonstration, or better, for with enlargement it is simple to go beyond the limits of the naked-eye viewing.

On the right-hand side of the console at each student station is the television receiver and the sound accompanying the picture emerges from a separate loudspeaker located beside the intercom speaker. In the center of the console is a small door labeled "Physiograph Distribution System," behind which various connectors deliver the broadcasted graphic recording information. Televised material normally originates in the demonstration theatre but can come from the human studies room, a slide projector, local television stations, or remote pick-ups.

In the demonstration room (Fig. 3), the experimental subject is illuminated from above and is covered by either of two cameras with appropriate lenses for the event to be shown. Adjacent to the subject is a standard Physiograph which simultaneously records the data from the experimental subject and forwards the same electrical signals to all twenty student stations. The demonstrators stand at the subject or demonstration Physiograph wearing telephone operator's combined earphone-microphone headsets. Behind them is a blackboard and above it a six-channel oscilloscope which can write the same three channels the pens are recording, or three other channels. Two television receivers in the demonstration theatre monitor the picture being sent to the laboratory. The two-way conversations that arise during demonstrations, as from a student's question, are heard at all stations. We find that duplex communication is an important asset during the demonstration, for the "feed-back" from the students helps us to pace the demonstrations and their repetitions to the students' requirements.

The addition of a graphic record adds to the breadth of the sensory channels by which communication is established and adds thereby to the effectiveness of what is in essence a reconstituted experience. Since correlation of one phenomenon with another is a principal method of physiological study, the availability of a graphic record of the

events of the demonstration reinforces its value; fleeting impressions are preserved, and opportunity is gained for more complete analysis and quantitative study. Since all students have identical records, opportunity for fruitful discussion is constantly at hand.

In our experience, there are four situations in which the "broadcast demonstration" is of genuine value in communicating information and stimulating interest in physiological phenomena: (*a*) when the preparation is technically difficult, (*b*) when an experiment is undergoing development for future assignment as a routine laboratory exercise, (*c*) when new transducers are being designed for a particular array of physiological parameters, and (*d*) when fleeting or unusual events occur that could be witnessed with profit by a large group.

Study of the influence of neurosympathetic activity serves as an example of the first category. This topic comes early in the course, before the student has attained a level of surgical proficiency to permit him to gain easy access to the accelerator and splanchnic nerves. At this time it is appropriate for the instructor to make the preparation and to demonstrate it visually and graphically, ultimately leaving the preparation in the demonstration room for students to repeat the stimulation procedures and obtain further records during breaks in their day's assignment. Usually this demonstration is combined with an assigned experiment on the regulation of blood pressure. Thus, during a single session the student will record blood pressure on his own experimental animal, stimulating the vagi, administering acetylcholine and epinephrine, etc., while later he will participate in the broadcast demonstration of sympathetic stimulation and eventually record the data for himself from the set-up preparation.

Two examples taken from routine demonstrations are shown in Charts 1 and 2. In the former figure the carotid blood pressure was recorded while the right stellate was stimulated. All twenty stations recorded the latency of response, the increased heart rate, and the increase in blood pressure during and after the period of stimulation.

In Chart 2 one of the splanchnic nerves was stimulated at the time indicated. All stations were able to observe the initial increase in blood pressure during stimulation and the later secondary rise, possibly from liberation of epinephrine into the general circulation.

Another valuable use of the broadcast demonstration in this area is to preview a difficult experiment. Frequently success depends upon technique and the scheduling of work in a proper and non-interrupted sequence. The basic procedure in an experiment can be quickly carried out by an instructor in full view of the television camera and seen by the class on their own screens. The principal phenomenon can then be broadcast to the class. In addition to demonstrating the particular phenomena sought, this type of demonstration serves as a stimulus to students, by demonstrating that success is attainable.

Before an experiment can be included in the laboratory manual, it must experience a considerable period of development to examine the full range, extent, variability, and stability of the physiological event. Furthermore, it must demonstrate its value to provoke thought and stimulate discussion. It is in these areas that the demonstrator can, by presenting the same material to all students while at the same time retaining communication with them, select the salient central point of the demonstration for emphasis and exclude irrelevant material. Furthermore, the skilled operator can develop the technique in front of the class and by answering questions as he proceeds, learn what parts of an experiment are likely to cause difficulties for students, and require further elaboration.

In our hands, the broadcast demonstration is assisting in presenting certain aspects of the phenomenon of secretion. Two future experiments, still scheduled as demonstrations, are on salivary secretion and urine flow. In the dog, Wharton's duct is not too difficult to locate but identification of the

chorda tympani still offers a challenge to those inexperienced in surgery. Although a copious flow of saliva can be produced by drug injection, stimulation of the chorda tympani is a more direct route to demonstrate salivary flow. In particular, this preparation is of value to illustrate the important fact that secretion is possible in the complete absence of circulation. The simplest way to demonstrate this is by simultaneous stimulation of the right vagus and the chorda tympani while records of salivary flow and blood pressure are made. Chart 3 is a typical record from one of these demonstrations.

In the case of urine flow, the importance of blood pressure is demonstrable with equal ease. If, during the recording of urine flow and blood pressure in the hydrated animal, the heart is slowed or stopped, the decreased

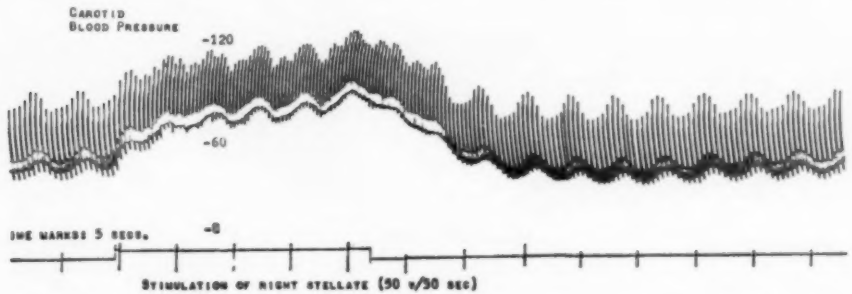

CHART 1.—The influence of sympathetics to the heart. This record of blood pressure in the dog shows the effect of stimulation of the right stellate ganglion. Note that prior to stimulation the heart rate was 132 beats per minute, and the expiratory blood pressure was 90/40 mm. Hg, with a pulse pressure of 50 mm. Hg. After 20 seconds of sympathetic stimulation the heart rate had increased to 204 beats per minute, and the blood pressure rose to 130/90.

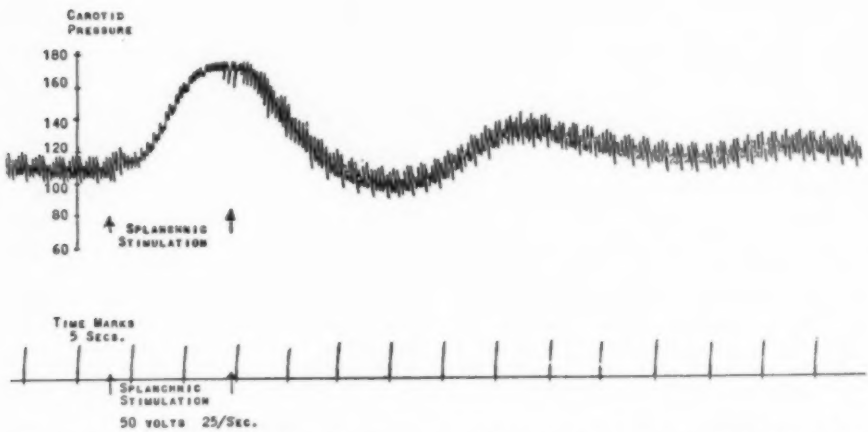

CHART 2.—Splanchnic stimulation. This record of blood pressure taken from the carotid artery of an anesthetized dog illustrates the immediate pressor effect of splanchnic stimulation. Between the arrows the left splanchnic nerve was stimulated with 50 volts at a frequency of 25 per second.

urinary output during the hypotensive period is readily apparent. Chart 4 was made during one of these demonstrations.

These two demonstrations on salivary and urinary output illustrate only a few of the possible points associated with the functioning of these organs. During each demonstration other techniques are tried and perfected, and after a sufficient number of trial and the suitability of a principle of transduction, a prototype transducer is constructed. One of the best methods of perfecting it is for a skilled operator to use it for demonstration purposes and evaluate its advantages along with its shortcomings. In this process the range of variability of the phenomenon is examined along with the operating range of the prototype transducer.

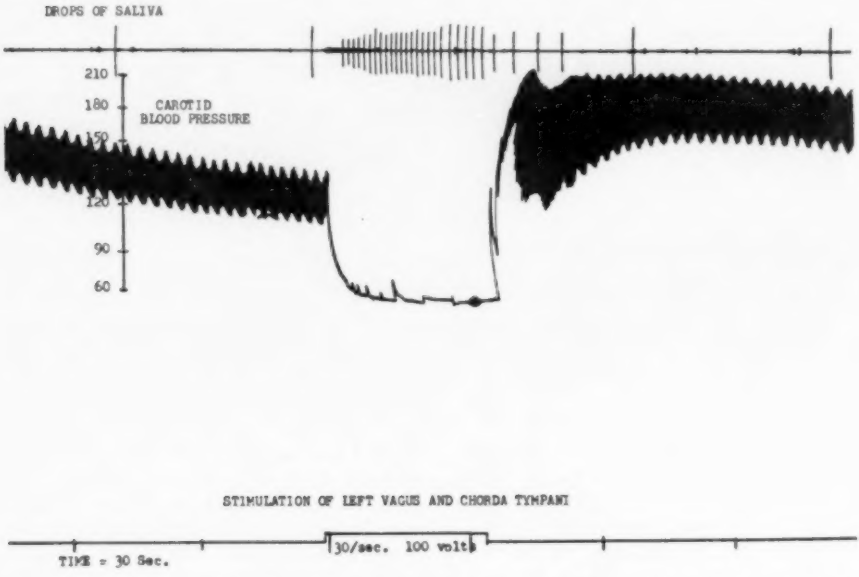

CHART 3.—Influence of blood pressure on salivary flow during simultaneous stimulation of left vagus and chorda tympani.

demonstrations an experiment will be constructed.

In our program and, indeed, in Physiology and Medicine there is a remarkable lack of transducers to convert physiological phenomena to electrical signals. This is due in part to the fact that many physiological parameters are undefined, but it is also due to the lack of trained people with the necessary dual background in physics and biology. Thus, transducers evolve on the "best guess" basis. From an estimate of the range and extent of a physiological phenomenon After many demonstrations and improvements, a transducer is evolved, compatible with the event and suitable for demonstration or use in routine laboratory assignments. During this development period, the student has the opportunity of witnessing physiological events rarely seen.

The broadcast demonstration demonstrates its value in exhibiting rare or fleeting events to a large group. Recently, for example, our diener found a giant turtle in a bayou behind the medical school and brought it in a wheelbarrow to the Physiolo-

gy Department for whatever value it might have had. We wondered if the sinus venosus were large enough to show its contraction, because, if it did, a splendid opportunity would be at hand to show the simultaneous electrograms and mechanograms of the three-stage heart.

Accordingly, the turtle was pithed, the plastron removed, and the heart exposed. The animal was so large that artificial respiration was required to maintain good cardiac activity. The heart chambers were exposed, and stimulating electrodes were applied to both vagi. When the heart was arrested momentarily by right vagal stimulation, simple inspection made it clear that the cardiac cycle started with the venosus beat. A televised picture showed this to the class, and, when myographs were attached, a three-channel graphic record to all stations clearly proved the point. Next, recording electrodes were attached to the venosus, atria, and ventricle, and electrograms and mechanograms were broadcast to all twenty stations, permitting the construction of the composite diagram of all six events shown in Chart 5.

Another example of a fleeting event, well exhibited by the broadcast demonstration, is the atrial heart sound. Although the sound is not easily identified in the normal animal, it frequently is present. It is often possible to isolate it when partial A-V block is produced. During a demonstration for other purposes made while recording blood pressure, EKG, and heart sounds (linear method), partial A-V block was created, and the record showed a sound associated with the *P* wave of the EKG. Particular attention was called to the phenomenon, and the procedure was repeated until all students had an adequate record. Chart 6 is a record taken from this demonstration, which shows not only the isolated atrial sound but makes

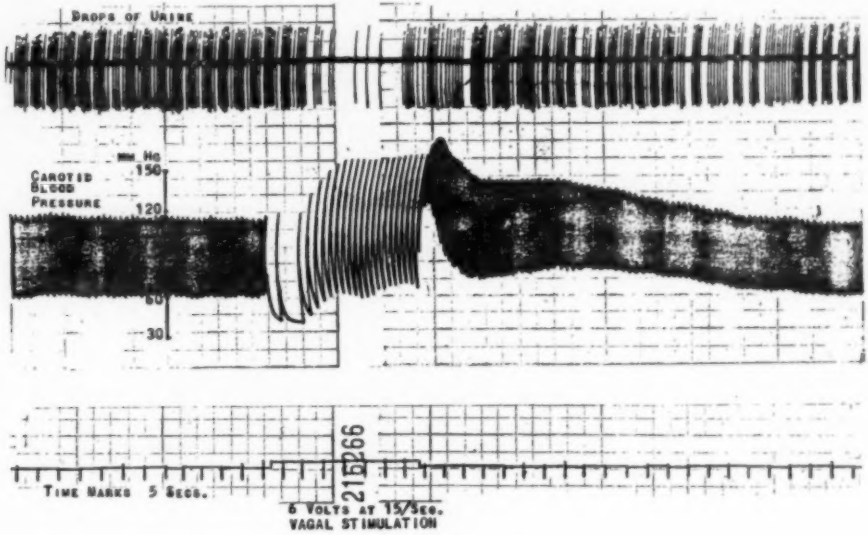

CHART 4.—Influence of blood pressure on urinary flow.
This record taken on an anesthetized dog illustrates the role of blood pressure in urinary output. The top channel is a record of the drops of urine coming from the cannulated ureters, each spike representing a single drop. The second channel represents blood pressure.
The blood pressure was lowered by mild vagal stimulation, and the decreased urinary outflow is evident.

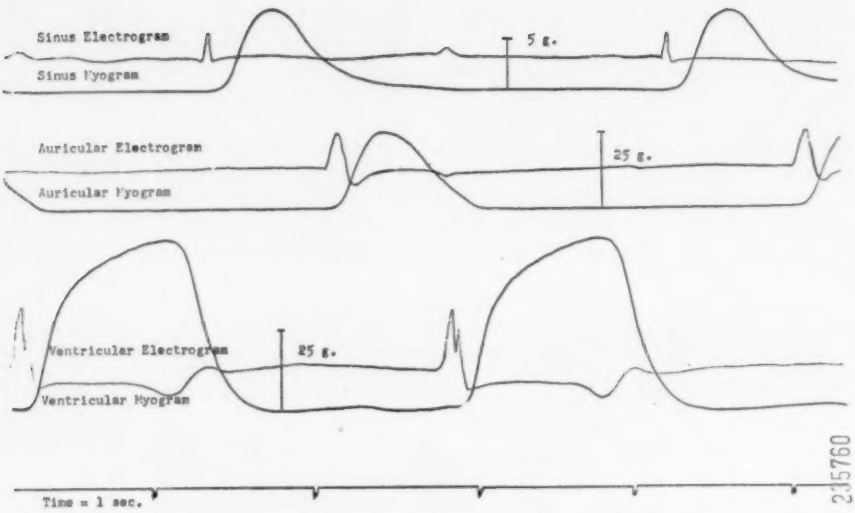

CHART 5.—Reconstruction of the events of the turtle heart

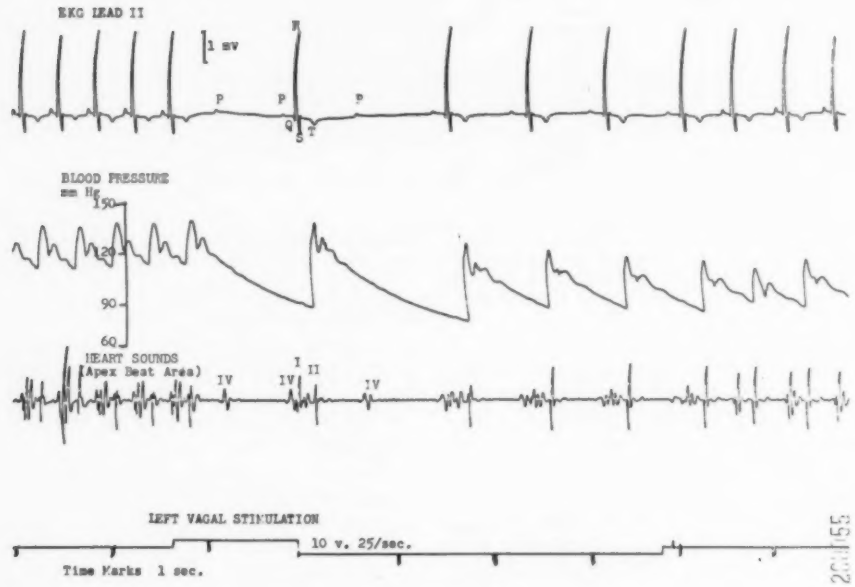

CHART 6.—The fourth or auricular sound

it possible to identify its contribution to the normal first sound.

Our files contain many similar examples of the use of broadcast demonstration to supplement direct personal contact with the living organism. Those presented here are designed to demonstrate our method of using the broadcast demonstration to present unusual but important physiological concepts and phenomena to the freshman medical class.

SUMMARY

We have now had two full academic years of experience with the new laboratory. We have written earlier, in describing the Physiograph, that it has served significantly to change the status of the laboratory in the teaching of Physiology, reorienting emphasis from obtaining results to understanding and interpreting them, broadening the spectrum of what the student can experience, and teaching him the recourse to experimentation. Thus, it has fostered the problem-solving approach, which leads from analysis of a problem to an effective solution. It has been apparent to us that these values have been reinforced by the new laboratory facilities which we have described here.

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Medical School Summer Sessions: The University of Michigan Experience

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Summer sessions have been conducted at a number of medical schools in the United States for many years, but their contribution to the over-all medical training program has not been discussed in the literature. This paper is concerned with the contribution of the summer session in assisting students with academic deficiencies to continue their medical training.

Opportunities for formal medical classroom instruction in summer sessions are available at relatively few medical schools. The annual report of the 1957 summer session opportunities for medical students issued by the Association of American Medical Colleges lists twenty medical schools in which some type of educational experience is offered for medical students from other schools (2). In only seven of the institutions are preclinical courses involving lectures or laboratory work offered. Thirteen institutions offer clinical clerkships only. Clinical clerkships generally do not provide regularly scheduled instruction or academic credit.

The University of Michigan Medical School has conducted a summer session for over 50 years. Recently there has been an enrollment of about 125 students annually. The majority of these students come from other medical schools and enroll for preclinical courses in order to make up academic deficiencies in their own schools.

The large number of academically borderline students in the summer session has raised questions about its worth. Is a medical school justified in providing additional educational opportunities for medical students with poor academic records, many of whom will probably not complete their medical training? The number of summer session students who ultimately are graduated from medical schools can be determined, and from this information some inferences may be made concerning the value of the summer session.

In the 5-year period from 1947 to 1951 there were 332 students from other universities who enrolled for preclinical courses at University of Michigan summer sessions. University of Michigan students also enrolled, but they have been excluded from the study since a large proportion of them enrolled in the summer sessions for reasons other than academic deficiencies.

An analysis of the academic records of the summer session work of these 332 students shows that the vast majority, 316, received passing grades ("C" or better). Only sixteen of the 332 students failed to receive a passing grade.

The names of the 332 summer session students were recorded, and the 1956 American Medical Directory was consulted to determine the number who were listed (1). This listing includes, for all practical purposes, all physicians who in 1955 were living in the United States or its territories or were temporarily out of the country. Two hundred sixty-six of the 332 were listed in the 1956 American Medical Directory. Sixty-six were not listed.

Since graduates from medical schools who later changed their names could not be traced in the Directory from summer ses-

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sion enrollment records and since those who died would not be listed in the Directory, it is possible that some of the 66 summer session students not listed in the Directory did in fact receive medical degrees. To determine the number of such instances, letters of inquiry were sent to the 37 medical schools to which the transcripts of the summer session work of these 66 students had been sent. All 37 medical schools responded, and from the additional information obtained it was learned that fifteen of these 66 students received medical degrees.

The 266 summer session students listed in the 1956 Directory, together with the additional 15 graduates discovered through correspondence with medical schools, make a total of 281 summer session students in the 5-year period studied who received medical degrees.

It is apparent from Table 1 that the great majority of students enrolled in the summer sessions, 1947–1951, subsequently received medical degrees. Fifty-one, or 15 per cent, insofar as could be ascertained, did not. Three of these 51 students are known subsequently to have received dental degrees, and one is in hospital administration as a layman. Of the remaining 47, 39 did not receive a medical degree from the medical school in which they were enrolled. Eight of the 47 did not enroll in the medical schools to which the transcripts of their summer session work had been sent. It is possible that some of these 47 students could have obtained a medical degree from some other medical school. None of the 47, however, is listed in the 1956 Directory under the name used as a summer session student.

The proportion of University of Michigan summer session students, 1947–1951, who subsequently received a medical degree compares very favorably with the proportion of 1949 freshman medical students in all medical schools who were graduated. Eighty-five per cent of the former and 92 per cent of the latter received degrees (3).

It should be pointed out that not all the students from other medical schools who enroll in the University of Michigan summer session are poor students. Some have fallen behind because of illness or other reasons unrelated to academic achievement. Some are making up course deficiencies because of curriculum differences encountered when transferring from one medical school to another. Although many of the summer session students have poor academic records, the exact proportion of such students is not known. However, this study is not primarily focused on summer session students with poor academic records. The point is that students with academic deficiencies, for whatever reason, are able, with the aid of the summer session, to complete their medical training. Almost all the summer session students at the University of Michigan are taking courses which they are required to complete successfully before they can continue their medical training.

TABLE 1

SUMMER SESSION STUDENTS, UNIVERSITY OF MICHIGAN, 1947–1951, BY RECEIPT OF MEDICAL DEGREES*

	No.	Per Cent
Received M.D. degrees	281	85
Did not receive M.D. degrees	51	15
	332	100

* Students enrolled at regular sessions at University of Michigan excluded.

It is possible that students could make up their deficiencies by repeating courses in subsequent years. In their study of the 1949–1950 freshman class, Dykman and Stalnaker found that 199 of the 7,032 students chose this alternative (3). Of these 199, approximately 80 per cent were able to obtain their degrees. Thus, for the 1949–1950 freshman class, repeating a course in a subsequent year salvaged almost as high a proportion of the "repeaters" as did summer session attendance for the group in this study. However, repeating courses in subsequent years delays the time of graduation and increases the already high costs of medical education. For these reasons, summer session work should be a more attractive alternative for most students.

In spite of improved methods of selecting medical students and the additional opportunities provided for those with academic deficiencies, there remains a certain proportion of students who fail to complete their medical training. With the limited number of training places for medical students and the generally recognized shortage of physicians, the social and economic cost of failure to complete medical training is a serious problem.

CONCLUSIONS

1. A study of 332 medical students from other universities who enrolled at the University of Michigan Medical School summer sessions, 1947–1951, shows that 281 or 85 per cent received their medical degrees.

2. The University of Michigan summer session enables some medical students who might not otherwise be able to complete their medical training to receive their degrees.

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A Method for Teaching Interviewing Techniques to Medical Students

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The history, the physical examination, and laboratory studies are the three major sources of information available to a physician from a patient. Whereas the techniques of the physical examination and laboratory studies are extensively dealt with in the medical school curriculum, much less emphasis has been given to the chief technique used in obtaining the history, namely, interviewing. Stevenson and Matthews (10) have commented that so little has been written about interviewing that many consider it a difficult art. Recently, however, there has been increasing interest in interviewing as an important tool for all physicians (5, 7, 10, 13). This interest has focused not only on the usefulness of interviewing skills in history-taking but also on its importance in promoting the therapeutic value of the doctor-patient relationship.

A number of authors (2, 3, 6, 9, 14) have commented on techniques of interviewing. The classic reference for beginning students in interviewing was written by Garrett (4), a social worker. However, only a few have examined methods of teaching. Deutsch (1) has used tape recordings to review the course of interviews with students and residents. Powdermaker (8), utilizing a small group approach, had the student present material, which he had gathered during an interview, to his fellow students and an instructor. She felt that the active interchange among the students was often the most beneficial learning experience for the student who had done the interview. In neither method were the interviews actually observed by the students and/or the instructor. Strauss (11) has suggested that the observation of psychotherapy is the most stimulating situation in which to learn interviewing techniques.

Medical educators have become increasingly aware of this deficiency. In a survey of several medical schools known to be interested in this problem, the authors found that many were formulating approaches to meet this need. These usually involved the student's interviewing the patient before small groups of his fellows and an instructor. Frequently, there was an integrated teaching approach, with several departments or disciplines participating. This paper will describe the organization, results, and problems of a course in interviewing techniques for junior students in the University of Cincinnati College of Medicine.

DESCRIPTION OF THE COURSE

The course in interviewing was given to the 3d-year students during the semester devoted one-third time to psychiatry. They met in groups of five with an instructor, for a total of nine 2-hour sessions. In the first session material on interviewing principles and techniques was presented. The following subjects were emphasized: observing doctor and patient and how they interact with one another; ways of establishing rapport; paying attention to such sources of information as the patient's bodily expres-

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sions, topic sequences, pauses, inconsistencies, and omissions; techniques of eliciting more information in a given area without blocking the patient with "leading questions" or other unnecessary interventions; and some comments on how to deal with various aspects of a patient's behavior such as silences, circumstantiality, suspiciousness, and hypochondriacal preoccupations.

The next three sessions were conducted by a psychiatrist-instructor on the visiting staff, with the students observing the "expert's" interview behind a one-way screen. The interview was then discussed by the assembled group. The remaining five sessions were structured in a similar manner, except that the students, in rotation, did the interviewing with the original instructor and the other four students observing behind the one-way screen. The patients were selected from the psychiatric in-patient service of a Veterans Administration Hospital. Most of them had been diagnosed by the hospital staff as having a neurotic character disorder or, when seen by the students, were recovering from an acute psychotic episode. At times the students'—and occasionally the instructors'—interviews were tape-recorded, so that significant details of the interview could be analyzed and commented upon. In the discussions it was emphasized that the usefulness of the interview as an information-getting technique depended largely on how the interview was conducted.

RESULTS AND EVALUATION

The presentation of a brief review of interviewing principles and techniques in the first session often stimulated the students to discuss their own past experiences in interviewing or being interviewed. Near the close of the session the students were introduced to the one-way screen and the tape recording equipment. They often asked questions about how the patients felt when these devices were used and whether this might be taking advantage of a patient or spying on him. Usually these questions were references to their own concern about being observed and supervised. The students were encouraged to answer patients' questions which seemed related to these techniques as directly and honestly as possible. This provided an opportunity to emphasize the idea that an effective doctor-patient relationship is most firmly based on mutual straightforwardness and trust. Finally, a brief interview with a patient was conducted and discussed.

This and the subsequent three interviews conducted by visiting staff psychiatrists provided an opportunity to observe the techniques and to learn the viewpoints of others. When it was possible for the instructors to comment critically on their own interviews, the students viewed their own efforts with more objectivity and less anxiety.

For the first student interview a volunteer interviewer was requested and usually obtained without difficulty. The instructions included the idea that the primary focus was to learn something of the patient's personality and to follow the course of the interview in terms of the dynamic interplay between the patient and the student doctor. Material which might be necessary for a clinical diagnosis was of secondary importance but could be explored in the latter portion of the interview. Many handled their anxiety during the interview by periodically resorting to their memory of a standard history-taking form. Others had a tendency to become over-solicitous or ingratiating to the point of avoiding any topic that might produce anxiety in the patients or themselves. The students' dilemma seemed to be, "Here I am in this totally unfamiliar role where every word and gesture is observed. I have to perform well, and yet I really don't know how. I have nothing to offer the patient; he is an educational exercise in this situation. I'll try to avoid anxiety-laden topics and thereby not subject him or myself to further abuse." In spite of these difficulties, many students conducted their own interviews with considerable skill.

Only one student was unable to conduct an interview. He had always been uneasy in situations in which others viewed his work. He was encouraged to participate in what-

ever way he was comfortable, and he was able to do so in the discussions following the interviews of others.

A number of techniques, in addition to those discussed above, were utilized to overcome the students' anxiety. The students were told that they were not expected to be expert interviewers. In discussions following the students' interviews, particularly the first one, the instructor focused primarily on constructive aspects of the student's performance. Comments about his errors were regulated according to what the instructor felt the student could accept. Actually, his fellow students usually protected him from excessive criticism. The authors' approach to this problem was influenced by their training and experience in group psychotherapy.

The significance of non-verbal behavior is frequently difficult to demonstrate in a convincing manner to students. The one-way screen is particularly well suited for this, since the instructor may comment, while observing, so that the whole group may share the behavior together. For instance, a patient spoke of minor difficulties with his wife, but as he did so he ground his cigarette butt into the ash tray. The interviewer, noting this, explored this area further and found that the marital relationship was the source of many of the patient's problems. Another example was the student who pushed his chair away from the patient each time the patient began to talk about angry feelings toward his father.

Insight, such as this, into the doctor-patient relationship was common and particularly acceptable when it came from one of their fellow students. They began to appreciate not only that the patient might react in an irrational way to the physician but that the reverse could happen too. An example of the former was the patient who could not talk comfortably to his student interviewer because he reminded him of a physician with whom he had had an unpleasant experience when in the service. An example of the latter was a student who recognized that his intolerance of the clinging, helpless attitude of a patient led him to such statements as, "Why don't you snap out of it!"

The simultaneous tape recordings provided a detailed review of the verbal interchange. Confronted in this way with their own interviews, the students were often able to view more objectively such things as inappropriate emotional reactions—the patients' and their own—and their use of leading questions. The significance of pauses, slips of speech, omissions, shifts, repetitions, and inconsistencies as useful sources of information was commonly recognized.

The variety of case material seen facilitated a discussion of such special problems as handling the talkative or the silent patient, the beginning and ending of interviews, how to change the area of focus, and how to approach anxiety-laden topics. Usually it was possible to demonstrate most of the problems in these areas by the discussion of actual case material.

On a few occasions, when there were only four students in a group, one interview was left over at the end, providing someone with a second experience. The students frequently said that they would be more comfortable, would be able to do a better job, and would learn more from a second interview, because they would be better able to profit from the critical comments of others.

THE STUDENTS' REACTION TO THE COURSE

To obtain further data to evaluate the course, questionnaires were distributed to the 77 junior students at the end of the school year. Fifty-nine returned them. A check list of alternative responses was provided for each question asked. The total number of students checking each of these responses is shown in Tables 1 and 2. In addition, spontaneous general comments were requested. The forms were signed by the students only if they wished to do so.

From Table 1, it is evident that the students approved of the use of the one-way screen and, to a lesser extent, of the tape recordings. Many of them liked the one-way screen because the interviewer was afforded

at least the illusion of privacy: "I forgot that anyone was watching behind the screen" was a frequent comment. On the negative side, some students complained of the uncomfortable seating arrangements and the at times poor audio reception behind the screen. In contrast to the many comments about the one-way screen, few were made about the use of tape recording equipment.

the other areas investigated in the questionnaire. By and large, however, they did not show any clear-cut preferences for one particular aspect of the course as compared with another. Question 10, about "learning clinical psychiatry," was asked in an effort to determine whether the instructors were giving in to the tendency to focus on this rather than on interviewing per se. The stu-

TABLE 1

STUDENT EVALUATION OF COURSE

QUESTIONS ASKED	ALTERNATIVE RESPONSES: Better	Same	Worse	PER CENT OF RESPONSES "BETTER"
How does the one-way screen compare with the learning value of being in the room where the interview is going on?	46	4	7	80
How does listening to play-backs of interviews on tape compare with group discussion without the use of tapes?	29	7	11	62

TABLE 2

SPECIFIC REACTIONS OF STUDENTS TO COURSE

QUESTIONS ASKED (DID YOU LEARN:)	ALTERNATIVE RESPONSES: 1 Very helpful	2 Of some help	3 Of no help	PER CENT OF RESPONSES "HELPFUL"
1. How to interview patients?	22	32	3	95
2. About the influence of the doctor's emotional reaction to the patient on the course and effectiveness of the interview?	22	28	3	94
3. By observing an instructor interview?	26	30	3	95
4. From your own interview?	34	16	7	88
5. From the supervision of your interview?	31	15	8	85
6. How to avoid leading questions?	33	24	2	97
7. How to obtain further information or explore unclear areas?	26	24	2	96
8. Where to be active and when to listen?	29	26	4	93
9. How to "read between the lines"?	20	30	8	86
10. Clinical psychiatry?	6	38	12	79

From Table 2, the responses to the first question indicate that 95 per cent of the students felt that the course was at least of some help. Four volunteered that this was the best course in the psychiatric curriculum; two thought it was the worst. With regard to questions 3 and 4, most students felt that they learned more from their own interviews than from those of the instructors.

The responses to question 9 pertaining to "reading between the lines" suggest that the teaching of this particular aspect of interviewing may have been less successful than dents' responses to this question suggest that this was not the case.

The questionnaire included an additional question: "Would you like to have this course at some other time during the 4-year program?" Forty answered "no," sixteen replied "yes." Most of the latter felt that the course should have been placed prior to the time spent on clinical psychiatry.

DISCUSSION

Through the sharing of past and current experiences and as a result of the construc-

tive criticism offered to one another, most of the students appeared to gain some proficiency in conducting and understanding interviews. The use of the one-way screen and tape recordings facilitated the study of verbal and non-verbal behavior. This afforded an excellent opportunity to explore the nuances of the doctor-patient relationship. It is felt that the course has helped to fulfill the need for more intensive concentration on the techniques of interviewing in the medical curriculum.

However, several shortcomings became apparent. There was a tendency on the part of many students to consider interviewing primarily a psychiatric technique rather than recognizing its applicability and usefulness in any branch of medicine. This misconception may have been fostered by the exclusive use of psychiatric case material and psychiatric staff as instructors. Probably, the ideal teacher would be one with training not only in psychiatry but also in other clinical medical disciplines. If this kind of personnel were not available, a co-ordinated teaching approach with other clinical departments participating would be recommended. Also, it would be preferable to use medical and surgical patients as well as psychiatric ones.

The question where such a course should be placed in the medical school curriculum deserves scrutiny. There seems to be some rationale for having it during the basic science (first and second) years, since interviewing is a basic technique for acquiring information. This may be outweighted, however, by the value of including it at a time when the student has had some actual experience with interviewing and has encountered some of the pitfalls involved. He may be better able to incorporate some of this information at that time. The authors have the impression, and this seems to be confirmed by the student responses to the questionnaire, that this course can accomplish its goals in its current position in the first clinical (the third) year.

The plans for amplification of the course include the interviewing of patients from medical and surgical as well as psychiatric wards, with the joint participation of these other departments. In addition, the number of sessions is to be increased by 50 per cent in order that each student may have the opportunity to interview at least two patients while being directly observed and supervised.

SUMMARY

The goals, content, and methods of a course in interviewing techniques for medical students are described and evaluated. An instructor met with five junior medical students for nine 2-hour sessions. The first session introduced the concepts and techniques of interviewing; during the last eight, either an instructor or a student interviewed a patient, with the others observing through a one-way screen. The assembled group subsequently discussed the interview at length, focusing on the content of the interview, the interviewing process, and the practical problems facing the interviewer.

Both the instructors and students found the course, in general, and the one-way screen and tape recordings, in particular, to be helpful in teaching interviewing as a technique for obtaining a history and for learning first-hand the significance of the doctor-patient relationship. These findings are demonstrated by the instructors' observations of the students during the course and by data obtained from a student questionnaire.

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Study of the Internship*

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INTRODUCTION[1]

In 1934 the New York Committee for the Study of Hospital Internships and Residencies was formed to study the kind of training received by house officers in hospitals of the New York Metropolitan area. Representatives of the New York Academy of Medicine, College of Physicians and Surgeons of Columbia University, Cornell University Medical College, Long Island College of Medicine, New York Medical College and Flower Hospital, and New York University College of Medicine originally comprised the membership. The Committee appointed Jean A. Curran, M.D., as study director, and, with the assistance of a number of other physicians serving on subcommittees, he proceeded to survey the internships and residencies in hospitals in the New York Metropolitan area. The Commonwealth Fund of New York provided financial support. The Committee issued a report of this survey in 1938 (5). It was the first systematic study of any large number of internships and residencies, and, to the Committee's knowledge, there have been no others equally comprehensive.

Since that time the New York Committee for the Study of Hospital Internships and Residencies has continued its work in various ways. It has encouraged the improvement of hospital training of interns and residents; re-surveyed individual hospitals from time to time; and made information relative to internships and residencies available to those responsible for them. In addition, for a number of years it sponsored a House Staff Educational Program which appointed educational directors for member hospitals and supplied a coordinator who could advise these directors and acquaint them with the medical educational facilities of New York City.

In the course of time membership in the Committee has increased to include representatives from the County Medical Societies, the Hospital Council of Greater New York, the New York Chapter of the American Hospital Association, the New York University Post-Graduate Medical School, and Albert Einstein College of Medicine. More recently the Committee has concerned itself less with assisting individual hospitals and more with the broader problems of intern and resident education. Toward this end, members of the Committee have attempted to formulate criteria for evaluating the adequacy of internship and residency programs and to identify which aspects of these programs may foster or curb achievement of desirable educational objectives. As part of the latter endeavor in 1957 they requested an exploratory sociological analysis of the nature of the internship and the range of problems which appear to be related to this period of training. Accordingly, the Committee asked Miss Theresa Falaguerra, a sociologist from the Bureau of Applied Social Research of Columbia

* The A.A.M.C. is about to launch a study of the internship. The paper published here raises some questions germane to the study. (Editor's note.)

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University, to carry out a preliminary study of the internship which might lead to an appropriate design for more definitive research.

A sociologist was chosen because considerable research has already been undertaken to investigate characteristics of the learning process that medical students undergo and to identify some of the factors that are relevant to this process (4). It is becoming increasingly clear that to gain a more complete understanding of the social processes through which the medical student becomes the practicing physician, one must also examine graduate medical training. In this regard Miss Falaguerra's exploratory analysis of the nature of the internship extends the work which has already been done. An abridgement of part of her report follows.

THE INTERN'S PROFESSIONAL ASSOCIATES: AN EXPLORATORY SOCIOLOGICAL ANALYSIS[2]

Sociologists study the structure and dynamics of social relationships. Applied to medical education, this focus entails concern with the social processes through which the novice medical student is transformed into a mature physician, as well as with the bearing of the social environment within which he studies and works upon his acquisition of knowledge and skills, attitudes, and values. In the case of the internship, for example, sociological research can explore systematically the various experiences of interns in hospitals and relate these findings to the several aspects of the intern's social environment—the hospital and the medical school—that may be found to bear directly on his learning. At present little seems to be known about the relative importance of many parts of the intern's experience, or the potential and actual effect of these on his performance as a doctor. Ultimately, however, such information could be useful to medical educators in determining which aspects of the internship are important to preserve and which aspects might be discontinued or modified.

Both interviewing and direct observation were used in the exploratory research undertaken for the New York Committee for the Study of Hospital Internships and Residencies. First, detailed, formal interviews were conducted with the fifteen members of the Committee, each of whom has long been closely concerned with graduate medical education. The primary purpose of these interviews was to provide basic source material on the kinds of problems which the members of the Committee feel exist in the internship. Second, to ascertain at first hand the extent to which these problems may exist, a brief period of direct observation was spent on hospital wards, including informal interviews with a small number of interns as well as residents and clinical clerks. These sources provide orientation, opinions, and a point of departure for future research. They are not, of course, a substitute for a representative sample of either persons or situations.

Content of the study.—The intern's experiences contribute to his growth as a doctor, i.e., to his acquisition of factual knowledge, medical judgment, and technical skills as well as to the development of his professional attitudes and values. Some of this experience is formal and planned, while other is informal and spontaneous. In these experiences the social context of learning—the hospital and its personnel—may be viewed as especially important, for every experience occurs in a concrete situation, and knowledge of the situation reveals much about the nature of the experience. Hence, this analysis presents the viewpoints of the members of the New York Committee for the Study of Hospital Internships and Residencies on the potential significance of several aspects of the hospital setting for the intern's training.[3] It focuses on the intern-

[2] By Theresa E. Falaguerra. The author acknowledges with appreciation the cooperation of the New York Committee for the Study of Hospital Internships and Residencies and the active collaboration of Mary E. W. Goss in carrying out this research.

[3] Systematic sociological research on the internship would involve extended observation of interns on various services and in different types of hospi-

ship as a concentrated period of learning for the intern and emphasizes the well known but often overlooked fact that learning is a phenomenon with social as well as personal correlates. Intended as a guide for future research, this analysis summarizes the potential effect on the intern's training of attitudes and values of several of his professional associates: namely, the Chief of Service, assistant resident and resident, other interns, attending physician, and clinical clerk.[4]

Chief of Service.—In the opinion of the Committee members the Chief of Service is of particular importance. It is thought that he "sets the tone" of hospital teaching. His interest, willingness, and enthusiasm to teach set the example for the service. The manner in which he conducts rounds and the presentation at rounds that he expects from the intern indicate the caliber of teaching which characterizes the service.

In turn, the Chief of Service's judgment of the intern's work may be regarded as particularly important to the intern. Although in hospitals where there is a house staff the intern may look to the resident and to the attending physican for immediate approval of his performance, ultimately he looks to the Chief of Service to set the limits on his professional behavior and to serve as his model. It is the Chief of Service who is responsible for the quality of medical care on his service, and therefore such an orientation by the intern is not unexpected.

Whether or not this may be desirable in actuality depends to a considerable extent on the outlook of the Chief of Service. If he is a doctor who exercises good critical judgment and maintains high standards, it is important for the intern to look to him for approval. Correlatively, if in the course of his daily work the Chief shows that he is truly concerned with every patient's welfare, he is a good model for the intern. However, if the quality of his teaching standards is low and he shows only routine concern for the patient who is an "uninteresting case," he may not be a good model for the intern.

While it was not possible in this study to examine in much detail the actual place of the Chief of Service in the intern's training, the exploratory information does suggest several questions for future investigation. A few are cited here. What is the actual range of the Chief of Service's influence on the intern? To what extent is his influence communicated to the intern by the chief resident rather than, say, the attending physican? In this connection, what consequences may such a pattern of communication have for the intern's care of the patient and the acquisition of new knowledge? How important does the intern regard the Chief of Service's judgment of his work? Does he, in fact, always regard the Chief of Service's judgment of his work as more important than the judgments made, for example, by other doctors on the service? Is the Chief of Service's attitude toward the people with whom the intern works the most important model for the intern? Or are there times when the intern feels the Chief of Service's attitude toward, say, the social worker, may be shortsighted? In other words, although the Chief of Service may be an important model for the intern, are there some conditions under which the intern himself does not regard the Chief of Service as his model?

On the other hand, what does the Chief of Service take into account in appraising the intern? Does he evaluate only the intern's medical knowledge and skill or does he also evaluate the intern's professional values and attitudes? For example, does he take into account how the intern handles the patient, what the patient may think of the intern, whether or not the intern is a "crackerjack technician," whether he knows the intern's father who may be a doctor, whether the intern is going to specialize or go into general practice, and what medical school the intern attended?

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tals, as well as interviews with them and the people with whom they may interact—for example, other physicians, nurses, patients—to study the climate of attitudes and values in which the intern functions.

[4] Other sections of the full report include: Methods of Teaching, Learning and Service in Patient Care, Teaching Material and Learning Contexts, The Hospital, and Types of Internship.

And what may be the consequences for the intern of the Chief of Service's approval or disapproval? For example, in what ways may it affect the intern's career plans? Is the intern of whom the Chief of Service thinks highly more likely to choose a career in academic medicine? Does the intern whom the Chief of Service finds lacking in certain qualities have difficulty establishing a private practice in the community in which the Chief of Service is located?

Assistant resident and resident.—In addition to the importance of the Chief of Service, the members of the Committee stressed the intern's relationship to the assistant resident and resident. In hospitals where there is a resident staff they believe the intern has an opportunity through informal day-to-day contact to learn from the staff member just ahead of him. Ideally, the intern-resident relationship is one of teamwork. In actuality, however, the relationship among the members of the house staff may range from working together as colleagues, comparable to a consultant, to the kind of relationship in which the resident regards the intern as an inexperienced apprentice working under his direction.

With this broad framework as a background for research, the following question may be raised: what is the extent to which the assistant resident and resident are able to provide adequate teaching for the intern? This basic question suggests several subsidiary ones. In what respects do the interns emulate the behavior of the residents? Do they sometimes do this in preference to following the example set by, say, the part-time attending physicians? Under what circumstances? What may be the consequences for the intern's training of such a pattern of behavior?

Moreover, in some hospitals there may be an overlap between the work of the intern, assistant resident, and resident. In what ways may this affect the extent to which the intern learns? In other words, what are the consequences of different kinds of house staff organization on the types of work the intern does, his opportunity for learning, and the quality of his performance? And, how may the kind of house staff organization ultimately affect the intern's values, attitudes, and skills as a doctor?

Other interns.—The nature of the intern's relationship to other interns may also be of considerable significance in the intern's training. It is thought that the group of interns as a whole creates the "social climate" of the service. In this connection, their relationship with each other might be explored. A few specific questions for research are suggested here. In what ways may the relationship among interns be important in the intern's training? Under what conditions may it tend to foster a cooperative or competitive spirit among the interns? To what extent may the intern group be considered a cohesive, tightly knit unit? If it is, does the intern tend to seek the advice of other interns rather than, say, the attending physician on the service?

Although the nature of the intern group may vary depending upon the type and size of hospital and the kind of internship, it is probable that the interns have an opportunity to observe each other's work. Thus, we may ask to what extent does the intern tend to regard the performance of his fellow interns as "bench marks" to measure his competence? Correspondingly, of what importance for the intern's training are the opinions of his peers?

Attending physician.—There seems to be considerable agreement among the members of the Committee as to the general responsibility of the attending physician as a teacher. His function is to guide the intern, rather than to issue orders to him. This distinction arises from the belief that the attending physician should first let the intern tell him the tentative diagnosis and plan of treatment; once the intern has set forth his ideas, the attending physician may ask questions about the diagnosis and treatment, and sometimes advise changes. Were the attending physician to begin by telling the intern his own diagnosis and plan for treatment, he would be directing the intern and possibly curtailing his development as a doctor.

This description of the ideal attending physician's method of teaching illustrates the desire both to safeguard the intern's opportunity to exercise responsibility in patient care and, at the same time, to provide supervision for the intern. What this responsibility may mean in a particular case varies, but there is provision for this responsibility in the standards of behavior set forth.

Although the members of the Committee agree on the general responsibility of the attending physician as a teacher, they disagree on the teaching ability of the attending physician in terms of whether he is a full-time or part-time teacher. In particular, there are differences of opinion among the members of the Committee as to the value and limitation of each.

For the intern's training, there may be certain advantages and disadvantages to the full- and part-time attending. On the one hand, the full-time attending physician can more readily provide continuity in teaching. By giving much of his time to teaching he knows many of their interests, their problems, and their shortcomings. It has been said that the intern can be allowed more responsibility with respect to patient care in a hospital where there are full-time instructors. They are more readily available to the intern than part-time instructors who are at the hospital for a few hours, once or twice a week.

On the other hand, the part-time attending physician, unlike the full-time one, is in private practice and can bring this experience to his teaching. Spontaneously, perhaps, the part-time attending physician sees the teaching patient in terms of how he would care for the patient in private practice. However, because he devotes the greater part of his day to private practice, he may not have time to keep up with the current medical literature and to study the teaching patients in as much detail as the full-time attending physician.

Interest in distinguishing between the full- and part-time attending physician is based on the potential and actual effect these persons may have on the intern's opportunity for learning. The following problems for research are indicated. In what respects may the outlook of the part- and full-time attending physician converge and diverge? For example, is there likely to be a difference in the amount of time the part- and full-time attending physicians spend with the intern discussing a particular patient? Then, what do the part- and full-time attending physicians consider to be the important qualities of the "good intern?" Where there are differences in their viewpoints, are these more apparent than real? What are the potential consequences of such differences on the extent to which the intern may learn? On the other hand, how may the conditions under which the intern learns alter his attitude toward the part- and full-time attending physician? Does the intern in a university hospital—where there may be many full-time attending physicians—regard the part-time doctor differently from the intern who is in a non-university hospital, where there are likely to be few, if any, full-time attending physicians?

Clinical clerk.—In some hospitals, principally the university teaching hospitals, the intern may work with the clinical clerk, i.e., the third- or fourth-year medical student who is on the wards to study patients.

When discussing the relationship of the intern to the clinical clerk, the members of the Committee expressed a considerable range of views. Some favor the intern and the clinical clerk's working together as a team. They believe that there is a place on the wards for both the clinical clerk and the intern. They feel the clinical clerk is busy learning as he works with the intern. In brief, what represents a protective environment for the clinical clerk becomes a teaching responsibility for the intern.

Others believe that there may be overlapping between the intern's work and that of the clinical clerk and resident. They feel there is a tendency for the clinical clerk to do much the same work as the intern, and for the assistant resident, rather than the intern, to teach the clinical clerk. From the

hospital's point of view, this may mean overstaffing. From the intern's point of view, such a situation may leave him in a vaguely defined position somewhere in between. These Committee members stressed that it is important for the intern that the ward patient relate to him as the doctor. If the clinical clerk is regarded as the patient's doctor, he is likely to interfere with the intern's training.

The diversity of opinions among the members of the Committee reflects what they believe to be the potential effect of the clinical clerk's presence on the wards. Many indicated they knew relatively little about the *actual* effect. From time to time they have talked with medical students and interns, but they have not studied the nature of their relationship in detail.[5]

An investigation of the relationship among the clinical clerk, intern, and resident might be conducted. The focus of such a study might be to learn in what ways their work may be said to complement and to overlap. Again, from the intern's point of view, this relates directly to the effect the type of hospital may have on the intern's opportunity for learning. For example, in what respects may the intern's responsibility be different in a hospital that has clinical clerks and one that does not have them? What are the observable consequences of this difference in the intern's training? How may this affect the medical knowledge, the professional skills, values, and attitudes he acquires?

Summary and conclusion.—An analysis of the internship was undertaken at the request of the New York Committee for the Study of Hospital Internships and Residencies in the hope that it would serve as an aid in formulating the appropriate role of the internship in the training of the physician and, at the same time, provide possible points of departure for research.

Although the internship may be viewed in many ways, in this analysis it is approached primarily as a period of education for the young doctor. As is well known, the intern may learn in many ways and from many people; the social context of such learning is therefore scutinized in some detail in this analysis. In particular, the social context provided by some of the intern's professional associates—the Chief of Service, assistant resident and resident, other interns, attending physician, and clinical clerk—is discussed. The analysis describes the apparent nature of these relationships and some of the uniformities and diversities of opinion which seem to exist about the place each occupies in the intern's training. Although viewpoints diverge in several instances, this is not unique among medical educators. Such divergence is implicit in the statement made by Deitrick and Berson in their recent report on medical education: "... there are as yet no standards of accomplishment for interns to achieve by the end of their internship training" (2, p. 271).

This statement by Dietrick and Berson, as well as the opinions expressed by the Committee members, suggests the need for research. Specifically, research might be undertaken to explore the range of problems which seem to be related to this period of training. Some of these problems are indicated in this analysis. Out of the many which were presented, two examples are cited here. What are the consequences of different types of house staff organization in limiting or extending the intern's capabilities as a doctor? And, what range of variation is there in the definition of the attending physician's role, and what implications may this variation have for the learning experiences of interns? More broadly, a program of research into the social processes by which the intern learns can be undertaken, with the objective of determining how particular internship programs contribute to the development of the doctor—to his acquisition of appropriate professional atti-

[5] To date, little work has been done on the relationship of the intern and clinical clerk. Deitrick and Berson's only reference to it is the following: "As clerkships have grown in importance, there has frequently been competition between the intern and the medical student for the patient's time and attention" (2).

tudes, values, skills, and knowledge. Toward this end, in 1958 Merton and his associates at the Bureau of Applied Social Research of Columbia University began work on a detailed sociological study of the internship and residency, under a grant-in-aid from the Commonwealth Fund (3). This study will explore the differences and similarities in the environment of learning afforded by a wide variety of hospitals and examine the phases of development as the young physician moves through internship and then through one or more years of residency. At the same time a committee of the Association of American Medical Colleges is beginning an investigation of the internship, with a grant-in-aid from the Kellogg Foundation. The objective of this study is to evaluate the educational quality of the medical school-controlled internship, both rotating and straight. This study and that planned by Merton and his associates may be expected to complement each other. It is hoped that the questions posed in this analysis may in some measure serve as useful points of departure for these studies of the internship, as well as others that may be carried out.

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MEDICAL EDUCATION FORUM

Editorial

THE NEED FOR MEDICAL STUDENTS

There is general concern today in regard to the need for more physicians to care for a burgeoning population. The desirability of expanding enrollments in existing schools, as well as the need for opening new schools, is a possible solution. The problems relating to the procurement of funds for the construction of new schools are discussed and debated. Concomitant with our interest in expanding facilities and programs, perhaps we have not given sufficient attention to a central problem—expanding the supply of well qualified applicants for medical schools. We suspect that this dilemma is not receiving sufficient attention. We suggest that quality and quantity must go hand in hand and that medicine should be deeply concerned about attracting high-quality medical students in the face of the demands for an ever increasing number of physicians.

In 1958, the enrollment in U.S. medical schools reached a record high, while the number of graduates showed only a slight increase. The number of applicants and the ratio of applicants to openings in the entering class did not change significantly.

The competition for good students is stiff. Careers in physics, chemistry, or engineering are highly popular, and these fields are siphoning off some of the young men who formerly pointed for medicine. There are several factors influencing the problem of attracting superior students.

One of these concerns the geographical restrictions placed on many of our publicly owned schools. These geographical restrictions force some medical schools to accept substandard applicants. The recent educational number of the *J.A.M.A.* reports that the number of scholastic casualties was significantly larger in the publicly owned schools as against the privately owned schools. We believe that an easing of the geographical restrictions that plague many of our public schools would narrow or obviate this unfortunate differential. In several instances the states which establish such restrictions actually lose doctors because the poor local product fails, while the good out-of-state student might be attracted to remain in the state to practice. Here is a problem concerning which cooperative action by the A.A.M.C. and the A.M.A. might pay a real dividend. Would local medical societies be willing to join with the medical schools in an effort to ease these restrictions?

How many first-rate potential medical students are lost to other professions because of the length of medical education? This is a favorite topic of discussion; yet the national trend is to require a degree before admission to medical school.

How many first-rate potential medical students are lost because of poor public relations by medicine? Public accusations regarding fee-splitting and ghost surgery or squabbles between staff and hospital administration do not increase the stature of the medical pro-

fession. Nor do conflicts between medical societies and medical schools—what was the impact of the recent Augusta controversy on the young people of that area? Each conflict loses potential medical students, and medicine cannot afford to lose them. The oft-quoted apprehensions about Federal control of medicine are carred to a point where they frighten off potential medical students.

It is possible, in addition, that, in competition with other scientific disciplines following Russia's launching of Sputnik, medicine has become a second choice. This situation may even be aggravated by a misunderstanding, by some potential medical students, regarding requirements for medical school—whereby some feel there is an overemphasis on the necessity for the liberal arts and a downgrading of the desirability of a scientific background.

We usually portray medicine as requiring long and expensive training, a hard working life and constant study. These things are true. We overstress these factors, however, without presenting the infinite variety afforded by medical practice, the position of respect which a physician usually holds, and the fact that the monetary rewards are commensurate with our contribution to society. How many of the physicians who constantly complain about medicine would change places with their neighbors in other occupations?

The problem of attracting first-rate applicants for medicine is with us today and will be thornier tomorrow. A cooperative effort by medical schools and medical societies is desirable.

J. Z. B.

Letters to the Editor

To the Editor:

The consequences of the newly developing program of the Educational Council for Foreign Medical Graduates, although foreseen in part during 2–3 years of planning, are only now becoming really discernible. Hospitals, their administrative staffs, and the patients they serve will feel the effect soonest, since it is, in fact, the basic purpose of the Council to assure that, after January 1, 1960, all graduates of foreign medical schools will have met the qualifications and standards now being established for appointments as interns or residents. Two opposing trends will then become apparent. Many graduates of foreign medical schools will be unable to pass the examinations of the ECFMG and will therefore not be available to fill the need of hospitals for interns and residents; on the other hand, well qualified graduates of medical schools throughout the world may be attracted by the opportunity now opening to them to demonstrate their own individual qualifications for hospital appointments in the United States. The number of well prepared foreign physicians may thereby increase, although the net effect on quantity is not so easy to predict.

While the supply of foreign physicians will be a matter of immediate concern to hospitals, other consequences of the new program are more directly within the province of the medical schools.

For the first time in the history of international medical education, a stern screening test has been interposed between a physician and his chances of obtaining postgraduate clinical

experience in another land. The necessity of the program is accepted widely both here and abroad; but the implications for international good will and for the one-world fellowship of physicians are only beginning to be felt. Many individuals will be debarred from the land of opportunity; the interdiction will affect more physicians in some countries than in others. Medical schools in the U.S. and Canada may then find themselves called upon to share with the hospitals, or possibly to take over from the hospitals, the responsibilities for meeting the international desire for medical education in the United States.

More specifically, would it not be timely and advisable for medical schools to give serious thought to the possibility of admitting more foreign medical students? This is not to say that the doors should be flung wide open, thus creating for medical schools a situation comparable to that from which the hospitals are now trying to emerge. Nor is the suggestion offered without regard to many difficulties arising from language and the differences between the foreign curriculum and that of an American medical school. However, qualifications of foreign students could be judged by suitably designed examinations such as the Medical College Admission Test for admission to the first year or a specially designed test for admission to advanced standing. Admittedly, many medical schools were unable to expand their laboratory and other teaching facilities for first- or second-year students. Additional students might be more easily accommodated for clinical training during the third or fourth year, after initial medical education in their home countries. Even if a medical school could find no room for additional students during any year, enrichment of the class would surely result from including within necessary limitations highly qualified and carefully selected students from abroad. A step in this direction now from within medical education itself would be far more salutary than awaiting the pressures which may be expected from without.

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To the Editor:

Concern has arisen among medical educators during the past few years over evidence that medicine is failing to attract the better caliber of science students. There are indications that certain fields of physics and chemistry are attracting the intellectual cream, while medical schools must content themselves with selecting from a group who, on the average, possess somewhat less intellectual potential. While there are many facets to this complex problem, discussions with premedical students suggest that a significant cause relates directly to the pronouncements of certain spokesmen for medical schools, who have been down-grading the importance of science in premedical preparation and thereby scaring away the scientists.

To quote two recent examples, a college student came to me with the following question: "I have decided to major in physics or mathematics, because I find these subjects offer me the greatest intellectual stimulation; yet I have no desire to spend the rest of my life with a slide-rule. I had hoped I might find a career in medicine where I could apply scientific knowledge to ease the suffering of my fellow man. Am I correct in understanding that medical schools are not interested in applications from physics majors?" A few days earlier a student in another college had posed his problem this way: "I am fascinated with experi-

mental biology, and would very much like to pursue an honors program in biology. To pursue this program, I will have to restrict my elections in the humanities. How seriously will I jeopardize my chances of being admitted to medical school by electing the honors program?"

There is no denying the value of fostering some breadth of social understanding and cultural insight in the premedical program. Just as certainly would we all condemn the college student who crams every course in science offered by his institution because he thinks such courses will give him a head start in medical school. Do we really endorse those statements of the case, however, which lead college students to surmise that a young man who finds intellectual stimulation in physics will be shunned by medical schools? Do we really want to discourage prospective students who seek to develop the responsibility for independent thinking that is nurtured by an honors program in science? Do we actually agree that we should try to stifle the appetite of students with intense interest and aptitude for science by side-tracking them into a number of miscellaneous courses in miscellaneous humanities? Such propaganda can serve only two purposes: For the student with somewhat limited interest, and hence probably limited aptitude, in basic science, it will be encouragement to take a minimum of science courses and thus fail to strengthen his weakness. For the student with an irrepressible drive to gain more knowledge of science, it will be evidence that medicine is really not the place for him.

Until we muffle the drums that are beating so loudly for English majors and history majors, we can scarcely expect to attract the cream of the science majors.

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November 14, 1958

ABSTRACTS FROM THE WORLD OF MEDICAL EDUCATION

Controlled Experiments in Teaching. C. R. B. JOYCE and M. WEATHER. The Lancet, pp. 402–7 (August 31), 1957.

Many medical teachers or schools in England and the U.S. have made attempts in recent years to improve educational techniques. The results of their studies are often encouraging and sometimes published, but they are seldom controlled with the rigidity of well planned laboratory or field investigations. The report of an extremely comprehensive inquiry into preclinical teaching in the U.S.A., for instance, devotes only three pages in 120 pages of text to the experimental evaluation of teaching methods (cf. *Report of the First Teaching Institute*, 1954). The present studies are controlled experiments in teaching carried out within the framework of ordinary courses for medical students. Alternative methods were compared by teaching different topics by different methods to the same students, or by dividing students into groups and then teaching the same topics by different methods to different groups. The experimental designs followed principles discussed by R. A. Fisher (*The Design of Experiments*, Edinburgh, 1951). The success of teaching was evaluated by short-answer and multiple-choice tests. The four methods of teaching considered were lectures, discussion groups, practical classes, and unsupervised reading. The experiment had two main phases: a preliminary study and a principal study. Both are described at length in this report and their results discussed in detail (they are represented graphically in Tables I, II, and III). Students' impressions of teaching methods are also evaluated (after completion of the course, and again immediately after the final examination, after which each student answered a questionnaire), as well as the influences of certain factors, such as the size of the class and expenditure of time in different methods of teaching. It is stated that the main purpose of this paper was to draw attention to simple methods which are available for evaluating parts of existing systems of teaching and of contemplated changes in it.

Die diagnostischen Grundprobleme der praktisch angewandten Heilkunde und ihre Bedeutung für die medizinische Erziehung (The Fundamental Diagnostic Problems in Practically Applied Medical Science and Their Significance for Medical Education). ROBERT N. BRAUN.

The value of advancements in medicine may be estimated by their significance for practically applied medical science. However, such evaluations seem to be lacking today. Especially in the field of diagnostics, nothing definite has been established regarding practical diagnostic measures. However, any approach to this problem meets first with the reigning confusion concerning the basic differences in diagnostic terms between clinical science and medical practice which make a sensible higher classification impossible for the time being. There is, for instance, the distinction between the so-called *subjects* in clinical science and the *diseases* in medical practice. This, in the author's view, is faulty thinking, the results of which are shown by the general statistics on morbidity in practice. The fact is that increasing specialization, together with the scientific vacuum in applied medical science, has opened a gap between clinical and practical science. Attempts made by specialists to overcome this gap are not enough: the practitioners must also do their share. This

would require a good number of *investigating* practitioners willing to impart their knowledge as a contribution to medical education.

Die Psychiatrie in Sowjetrussland (Psychiatry in the Soviet Union). Dr. J. E. Meyer. Deutsche Medizinische Wochenschrift, V, pp. 191–92 (Jan. 31), 1958.

In this review, Dr. Meyer briefly discusses some of the most important features in a series of reports on Soviet psychiatry, published by the Free University of Berlin (cf. B. Lustig, *Neue Forschungen in der sowjetischen Psychiatrie. Berichte des Ost-Europa Instituts an der Freien Universität*, Berlin, 1957, Heft 31). These studies (based on 143 Russian authors) offer, besides an outline of the history of psychiatry in Russia, a number of statistical data on mental illness in the Soviet Union which cover 193 institutions; a survey of the predominant theories in psychiatric research; methods of treatment of mental illness in Soviet clinics and hospitals, and general concepts of therapy. It is pointed out that the neurophysiological approach (after Pavlov) predominates in current investigations of schizophrenia, but histological (Smirnov) and biological research is also undertaken. Psychopathology is considered mostly as a sociological problem, and an alleged decrease in mental illness is credited to the new social structure in Soviet Russia. Hereditary or constitutional factors are given little importance. In therapy, sleep and insulin-coma treatments are predominant. Studies on individual psychotherapy seem to be completely missing in Russia. The report draws attention to a certain diagnostic scheme, proposed by Giljarovski, which now is widely and, as it seems, successfully applied in Russia. The program of the Congress for Psychiatry and Neurology, which took place in Moscow in February, 1956, gives an idea of what Soviet psychiatric and neurological research is especially interested in today. There, the following subjects were considered of foremost importance for future investigation: (1) schizophrenia (clinics, pathogenesis, etiology, relation to virus infections, therapy, etc.); (2) neuro-infections; (3) vascular brain diseases; (4) problems of dynamic functions localization.

La Enseñanza de la Neurocirugia a Estudiantes y Postgraduados (Teaching of Neurosurgery to Students and Postgraduates). German Hugo Dickmann. La Prensa Medica Argentina, 45:685–88, 1958 (Buenos Aires).

As a contribution to the joint efforts, now under way, to reorganize Argentina's medical education, Dr. Dickmann, who directs the Institute of Neurosurgery of the Univ. of Buenos Aires, gives a panorama of neurosurgery teaching in outstanding medical schools of both the Old and the New World. In Europe, Prof. Dickmann's survey covers briefly the principal medical faculties in France, West Germany, Sweden, Switzerland, and Holland. In the United States the medical schools of Johns Hopkins, Yale, and Duke Universities; and in Canada, McGill University, Montreal, and the University of Toronto's Medical School receive special attention. As to South America, only Brazil is mentioned where the Univ. of Rio de Janeiro's School of Medicine has a special chair for Neurosurgery, whereas in São Paulo's Faculty of Medicine this branch is included in the course of clinical neurology. In all the countries reviewed, teaching of neurosurgery is assigned an important place in medical education, although the methods and underlying concepts differ. In Dr. Dickmann's opinion, teaching of neurosurgery within the frame of the medical curriculum must not be designed to train specialists. Its aim should be to equip new graduates with sufficient knowledge and skill to conduct methodically a neurosurgical examination of a patient, and to acquaint them thoroughly with those problems of neurosurgery with which they are likely to be confronted in medical practice.

Internal Medicine and the Training of Internists. Paul S. Rhoads. A.M.A.

Archives of Internal Medicine, **102**:515–19 (Oct.), 1958.

This editorial opens with the question: What is an internist? A satisfactory definition of this "most all-inclusive" of specialties is, as the author shows, hard to find. Sir William Osler, in his essay "Internal Medicine as a Vocation" (in *Aequanimities* . . . , 2d ed., Philadelphia, 1922), refrains from defining it as a specialty, though, he points out, it embraces at least half a dozen, and he wishes "there were another term to designate the wide field of medical practice which remains after the separation of surgery, midwifery, and gynaecology." Osler's standards for those to be regarded as internists are very high, but opinions differ widely as to the kind and amount of training required. The whole dilemma may appear purely academic to some, but, as the author points out, to those who are about to take the Board of Internal Medicine examinations (after 5 years of postgraduate preparation) the question is practical and urgent: Upon the Board's estimate of what makes up the body of facts and skills which the internist must have can depend success or failure. In a 1940 brochure the Board states as a general principle that "a sound knowledge of physiology, biochemistry, pharmacology, anatomy, bacteriology and pathology as they apply to disease" is considered essential for the development of a good internist. Although Dr. Rhoads does not question the desirability of such emphasis on nonclinical disciplines, he does point out that there are also differences of opinion as to what constitutes "sound knowledge" in these subjects. But even more difficult than to decide what makes the proper training of the internist is the answer to the author's second question: What kind of a doctor should be encouraged to enter the field of internal medicine? The answer to this question lies in the evaluation of a series of "intangibles." However, the steps actually being taken by investigating committees from the College of Physicians to learn more about what makes up the residency program in the various approved hospitals could well furnish some indication of what the various internists in charge of residency programs consider important. Furthermore, through an interchange between teachers in the various hospitals and the Board more minds could be focused on the problem of arriving at some clearer definition of the minimum body of knowledge and skills which should reasonably be required of all internists. It is also suggested that an examination devised to test a candidate's grasp of the "fundamentals"—when agreed upon—could be given *at the end of the 3-year residency program*. Much anxiety could be spared those who wish to enter the field of internal medicine if a candidate could be assured that the decision regarding his Board certification would be made on the basis of such points: (1) consideration of a comprehensive report on his performance by certified internists and medical faculty members (from these reports would come valuable information on the "intangibles"); (2) demonstration of the ability to take a good history, to make a good physical examination, and to make logical conclusions and recommendations after reviewing the laboratory data on one or two patients chosen at random; (3) demonstration of a fairly good grasp of fundamental knowledge of internal medicine as a whole, plus more complete knowledge in one field of special interest.

Medical Students and the M.M.P.I.
J.A.M.A., p. 433 (Sept. 27), 1958.

Dr. W. Ironside (Otago Medical School) reports about difficulties encountered when using the Minnesota Multiphasic Personality Inventory (M.M.P.I.) outside the United States. The principal drawback is that the cultural background of subjects of other nationalities may give a pseudo-pathological significance to their test scores. A study of the discrepancies between the test results of American and other groups may therefore be considered useful for future improvements. The group test results of 167 out of 168 5-year male medical students in Otago were compared with those of three groups of

American male medical students at about the same stage in their careers. Many highly significant statistical differences in their scores were found (only the scores in one clinical scale, *hysteria*, did not differ significantly). Otago students differed most from their American counterparts in the "interest" scale, which has to do with general sexual attitudes. Post-test interviews suggested that the considerably higher "interest" score in Otago students was not to be understood simply in terms of a difference between the sociosexual mores of the Otago students and those reflected in the elaboration of the M.M.P.I. The uniformity of group responses, if confirmed by further investigation results, should make it possible to establish norms and determine the significance of individual deviations.

A New Medical Curriculum. D. C. SINCLAIR. The Lancet, pp. 430–34 (Aug. 30), 1958 (London).

In 1957, the newest medical school in the British Commonwealth, that of the University of Western Australia, opened its doors to medical students. This same year, the General Medical Council decided to eliminate the details in its recommendations to medical schools which had up to then hampered any attempt for experiment and reform in medical education. Because of these circumstances those who had to frame the curriculum for the new medical school were given a relatively free hand. The author of this paper, a professor of anatomy at the University of Western Australia's new School of Medicine, describes in detail the planning and actual organization of its curriculum, which, in the given circumstances, represented a bold experiment in medical education. This curriculum reflects the basic concept that teaching and being taught is a co-operative endeavor and demands the closest possible coordination between the different departments. Although in many aspects the curriculum must be considered as tentative and subject to modifications in the course of time, Dr. Sinclair thinks it is unlikely that the basic principle on which the planning has been founded will be altered.

Academic Revoke and Failure among Oxford Undergraduates. S. G. SPENCER. The Lancet, pp. 438–39 (Aug. 30), 1958 (London).

The diversity of grants since the war has much increased the pressure on students at Oxford, and academic demands have imposed stress from which the unstable may all too easily run away. This paper (by a member of the Univ. of Durham's Dept. of Psychological Medicine) deals with the problem of "running away" from work or examinations. It does not take into account the problem of simple "work panic," already covered by Malleson (1957). One hundred Oxford undergraduates were closely studied while under psychiatric care at the Warnford and Park Hospitals (Oxford). The results of this investigation, which is described at length in this paper and illustrated by graphics, show that academic revoke from work or examinations triggered or helped to trigger the illness of 42 of these 100 undergraduate patients. In four others it was a prominent feature of the illness; in fourteen, it was the major feature of the breakdown. The revokers were predominantly in the hysterical neurotic subgroup, fat and muscular in physique, extroverted in personality, and more unstable than average. Normal in intelligence, they had poor academic results compared with those of psychiatric patients at Oxford in general. Special techniques had to be devised for their management, particularly "continuous pressure" therapy.

What Should the Student Learn in General Practice? ROBERT LOGAN. The Lancet, pp. 440–41 (Aug. 30), 1958 (London).

Medicine in a hospital is essentially different from medicine in general practice. Recognizing this difference, most medical schools in England are now concerned with the teaching of general practice, or at least

with showing the final-year student what morbidity outside the hospital looks like. The system of "farming out" students to general practitioners for short periods is believed to be insufficient. What needs to be taught is the application of the principles of medicine in the setting of general practice. A contribution to solving this problem was made by Manchester University by setting up Darbishire House as an experimental health center. This experiment, discussed in detail by the author (a reader of Social Medicine at the Univ. of Manchester), brought under one roof four local general practitioners whose combined National Health Service list amounted to 11,000 patients. All physical amenities essential to good general practice were provided, together with x-rays and facilities for pathology. District nurses, a social worker, health visitors, and clerical help were available for maternity, child welfare, and school clinics, all run by the practitioners and the health visitors. Students come to the center in groups of four for 2 weeks and are attached individually to the doctors. During this period, each morning is spent in the surgery, where some 300 patients are seen, and visits made to 100 homes, which allows intimate observation of the patients and their families. Furthermore each student is assigned by the practitioner one sick family to study and to present to the group during the discussions, which take place in the afternoons. Dr. Logan thinks that this experiment, though only a beginning, is a good step in the right direction. He fears, however, that to absorb the whole program in a fortnight might prove too much for many students, and it is his opinion that the time could be doubled with advantage.

Medical Students and General Practice. DEREK BERZON. The Lancet, pp. 441–42 (Aug. 30), 1958 (London).

Derek Berzon, final-year medical student at Royal Free Hospital, London, attended once a week for 3 months the evening surgery of a general practitioner in Hampstead, N.W. London. In this paper he comments on the ways in which this experience helped him overcome the gaps in his knowledge of practical medicine which he had felt acutely during his 3 clinical years. Four main benefits were gained from these visits: (1) first-hand observation of the actual running of general practice and of how conditions differed from those in the hospital; (2) the opportunity to see patients in their own environments on domiciliary visits, which made him better aware of how the environment may often influence a patient's treatment; (3) acquaintance with some of the general practitioner's difficulties in assessing the significance of mild and early symptoms in a patient seen for the first time. (4) He felt fortunate that he was "sitting in" with a doctor particularly interested in psychological medicine, who directed his attention to the fact that many patients at any one surgery have symptoms partially or wholly due to anxiety states, and showed him how questioning revealed the psychological nature of some of the patient's complaints. The described method of taking a look at general practice has gained, as the author reports, in popularity among the students at the Royal Free Hospital, so that 40 out of 60 eligible students "sat in" with a general practitioner during 1957–58, and 33 have already applied during the first 6 months of 1958–59.

Discussion Groups for Paediatric Students. VICTORIA SMALLPEICE. The Lancet, pp. 443–44 (Aug. 30), 1958 (London).

For the past 10 years medical students, during their training in pediatrics at Oxford, have been asked to make studies and to read papers on some specially selected subjects. In this paper, Dr. Smallpeice (clinical director of Children's Department, United Oxford Hospitals, and a Lecturer in Diseases of Children at Oxford) discusses the general plan of this institution and its modifications during the past decade. Looking back, she tries also to judge what type of questions has interested students most and

produced the best work. Among these subjects the following are mentioned: repeated respiratory tract infections acquired during the first 2 years at school; family problems and family background in pediatrics; neonatal and infant deaths; the forms of mental defect which may be preventable or treatable; ward infections, etc.

A Teaching Room on the Ward. J. K. Russell. The Lancet, pp. 444–45 (Aug. 30), 1958 (London).

During the clinical years medical students spend much of their time in the hospital, and great stress is laid on teaching at the bedside. But, while it is considered undesirable for a teaching session to be completed at the bedside, there is usually no place provided for follow-up discussion. The gynaecological staff in the Royal Victoria Infirmary, Newcastle (England), has long felt the need for a permanent teaching room on the ward. In 1955 with the support of the teaching-hospital group and the University of Durham, it became possible to establish a special room for this purpose. This paper deals with the planning and equipment of this special room, and the advantages gained by this innovation are discussed and illustrated by some examples.

Illustration Display Stand. M. C. Joseph and R. C. Mac Keith. The Lancet, p. 445 (Aug. 30), 1958 (London).

A stand for displaying pictures and charts has been used as a teaching aid in the children's department at Guy's Hospital, London, for the past 2 years. This article describes its design and demonstrates how it is worked. One of its most appreciated features is the ease with which several students or nurses can view the illustrations displayed on the stand simultaneously.

Education for the Tropics. John Wright. The Lancet, pp. 453–56 (Aug. 30), 1958 (London).

The author, who was a medical officer at the Methodist Mission Hospital in Ilesha, West Nigeria, discusses the problem of how to develop adequate health services in the tropics. The problem, according to him, is one no Western country, in its own long-term interest, can afford to be complacent about. The urgency of this problem, however, is often found hard to appreciate. Although Great Britain, the author thinks, has made many real contributions to the health of underdeveloped countries during the last half-century, many doctors trained in British schools and practicing in the tropics would confess doubts as to whether they were achieving anything solid by working on the pattern of English practice. How, then, can medical students be prepared for a practice in the tropics, and what shall they be taught? After discussing a series of subjects as examples of what should *not* be taught (because they do not take into account particular conditions in the tropics and would be pointless there) Dr. Wright comes to the conclusion that it is not enough merely to add a course in "tropical medicine" to the present form of medical education but that there must be some attempt made instead to teach "medicine in the tropics." What is urgently needed is a great deal of careful thought in adapting Western medical practice to the local scene. How this adaptation can be achieved by planned "tactics" and "strategy" in medical practice with a tropical background is also discussed in this paper, and some ways are suggested in which a Western medical student may be successfully trained for the exercise of his profession in underdeveloped tropical countries.

Physicians for Tomorrow. L. E. Burney. The Thirteenth Martin Memorial Lecture, American College of Surgeons, Chicago, Oct. 6, 1958.

Dr. Burney, Surgeon General of the U.S. Government Public Health Service, builds his lecture around one question which, as he points out, has confronted our society with increasing urgency during the last decade, namely: How shall a growing and expanding

nation like the United States be supplied with adequate numbers of well prepared physicians? Recent estimates by the Public Health Service show that the U.S. has now approximately 230,000 licensed physicians for a population of 175 million. While there is no general agreement as to whether this number is adequate, nobody doubts that the present and predicted output of our medical schools will be insufficient to meet the increasing demands of a growing population. As to specific shortages, some significant assessments have been made in recent years, such as that by the American Psychiatric Association which estimates that it would take at least 6,000 additional psychiatrists to bring the personnel ratio up to recommended standards in mental institutions. In general, the lack of a total of some 10,000 physicians in medical faculties, health departments, public hospitals, veterans' facilities, and Public Health Service, represents, in Dr. Burney's view, "a very real and present emergency." Another striking evidence of the country's urgent need is the fact that there are some 14,000 approved internships in American hospitals, that is, twice as many positions as the number of medical graduates. This and other similar evidence justify the statement that the United States is a "have-not" nation in medical manpower. In order to maintain our present ratio of physicians to population (132 per 100,000) in the next decade, "the output of physicians would have to expand by 1970 to 8,700 a year for domestic schools, plus another 750 from foreign schools . . ." (see the August, 1958, report of former secretary Folsom's Consultants on Medical Research and Education). That is, the yearly domestic output would have to rise by 1,900 in 1970; but, meanwhile, no substantial increase in the production of physicians is even in the making (for 1960–65 the best that can be expected is an additional 220 American graduates per year). As to the question of what should be understood by a "well-prepared" physician, Dr. Burney points out that the leaders in American medical education have emphasized the central goal of the undergraduate medical school as defined at the First World Conference on Medical Education (1953), namely: "To turn out someone fundamentally equipped to be a practicing doctor . . ." They are agreed that the period of training should not be specifically directed toward any one specialization (general practice included), "but should provide the student with a foundation for his after-career in any branch of medicine." The graduate of a medical school, according to the same definition, should also be ". . . an educated person grounded in principles and methods, able to see what the whole of medicine stands for and means. . . ." Though this may still be an ideal less frequently realized than one would wish, Dr. Burney is confident that physicians of the future will be close to that ideal if our medical educators are supported in their aspirations. He points out that great progress is already being made in experimental programs and Teaching Institutes within the last decade, and as a result of the emerging new structure in medical education he predicts an increasing liberalization of the curriculum and integration of teaching, so that the student may indeed "see what the whole of medicine stands for and means." Concerning the problem of *how* shall the nation be supplied?—the central imperative of the observations made is that the nation must plan and act as a nation in the development of manpower. Leaders in medicine, education, public affairs, industry, and government are challenged to reach some agreement on national goals in medical education and on the means to attain them. As a concrete step in this direction, Dr. Burney, with the approval of Secretary (of Health) Flemming, invites a group of national leaders in medicine, education, and public affairs to serve as an Advisory Committee on medical education to the Public Health Service.

NEW BOOKS

KENNETH E. PENROD
Book Review Editor

Abstracts

Anatomy for Surgeons, Volume III: **The Back and Limbs.** By W. HENRY HOLLINSHEAD. New York: Paul B. Hoeber, Inc., 1958. 887 pp. $23.50.

The third and last volume of this set was compiled with the aid of twelve consultants. The author himself is consultant to the Department of Surgery of the Mayo Clinic and Mayo Foundation. In preparing this text, the author had two goals: (1) to present to the younger surgeon not only a review of the broad basic anatomy with which the surgeon is necessarily concerned, but also a discussion of those details in which the more mature surgeon, consciously or unconsciously, bases his daily work; (2) to provide for the more mature surgeon both a refresher for those details which are slightly outside his own special field of interest and a source of ready reference to the details which, although lying in his own field, he cannot expect to keep constantly in mind. Since most surgical procedures are based upon the anatomy, or the physiological anatomy, of the part concerned, reference is made to specific surgical procedures throughout the book. Although some of these will undoubtedly not stand the test of time, the basic anatomy will remain the same. Many of the illustrations are purely diagramatic, and are planned to accompany the text in much the same manner that one draws diagrams upon the blackboard to illustrate points in a lecture. They are therefore intended to be simple and easily comprehended. As with the previous two volumes, "The Head and Neck" and "The Thorax, Abdomen, and Pelvis," it was not intended that this should be a complete descriptive anatomy; rather, an attempt has been made to describe and interpret, with a minimal soporific effect, the anatomical facts and concepts which the surgeon has found useful.

Elements of Biophysics. By JAMES E. RANDALL. Chicago: The Yearbook Publishers, Inc., 1958. 322 pp.

This book represents an effort to present to the student of biology and medicine the physical and quantitative concepts of basic importance to these fields. It is offered as a stepping stone between undergraduate physics and the current physical interest in biology and medicine. This text has developed from a 32-lecture course in biophysics at the University of Missouri Medical Center. The first four chapters of the book produce certain aspects of the quantitation process which are important in current medical thinking, but which are not usually experienced in a student's background. This section begins by pointing out the inherent simplicity of quantitation which results from defining all physical quantities in terms of mass, length, and time. Also, several mathematical operations upon quantities are illustrated in physiological terms, including integration, differentiation, exponential rate phenomena, and frequency analysis. The features of measurements and instrumentation, the practical means of obtaining quantities, are included, with stress on the limitations imposed by biological material. The chapter on statistics summarizes many of the basic ideas which must be understood in order to quantitate and assess the significance of magnitudes which are subject to variabilities so characteristic of biology. Chapters 5 to 10 are concerned with creating an integrated picture of the forces and energies associated with masses, electric charges, and electromagnetism. In the remainder of the book the important aspects of nuclear energy are defined and illustrated for the biologist.

Applied Medical Library Practice. By THOMAS E. KEYS. Springfield, Illinois: Charles C Thomas, 1958. 449 pp. $10.75.

In the author's conception, a library is a workshop in which the tools and the materials are in order. This book contains discussions pertinent to the administration of a library, the acquisition and cataloguing of books and journals, the effective use of medical indices, and the fundamentals of medical bibliography. There

are precise discussions of abstract journals and hospital library procedures by his associates. A worth-while brief history of American Medical publishing and the authors of medical books is included. The appendices contain lists of medical book dealers of new books, antiquarian book sellers of medical and related subjects, medical publishers, medical works and facsimile, and a list of frequently used domestic and foreign medical journals. These should be useful to both physicians and librarians.

Diagnostic Bacteriology. By ISABELLE G. SCHAUB, M. KATHLEEN FOLEY, ELVYN G. SCOTT, and W. ROBERT BAILEY. 5th ed. St. Louis: The C. V. Mosby Co., 1958. 328 pp. $4.75.

The sub-heading of this book is "A Textbook for the Isolation and Identification of Pathogenic Bacteria and Systemic Fungi." The fifth edition is a revision by Mr. Scott and Dr. Bailey of previous editions by the two senior authors. There have been extensive revisions to bring the book up to date, to clarify the text to conform to present terminology, and to introduce new procedures. However, the original format and most of the material included in the previous editions have been retained. Much new material has been added, however. Four new chapters have been added, devoted largely to descriptive techniques. The book is written primarily for workers in clinical bacteriology laboratories, students of medical technology, and undergraduate and graduate courses in medical bacteriology.

Laboratory Instructions in Microbiology. By LOUIS P. GEBHARDT and DEAN A. ANDERSON. 2d ed. St. Louis: The C. V. Mosby Co., 1958. 261 pp. $3.75.

While this manual was designed to accompany the text *Microbiology* by the same authors, it can be used very successfully with other texts. The second edition has been considerably expanded. Descriptions of certain new techniques, equipment, and media have been included. Throughout, genus and species names of bacteria have been corrected to agree with the 7th edition of *Bergey's Manual of Determinative Bacteriology*.

Essentials of Clinical Neuroanatomy and Neurophysiology. By JOHN T. MANTER. 1st ed. Philadelphia: F. A. Davis Co., 1958. 126 pp. $3.00.

The sub-title of this book is "The Interpretation of Neurologic Signs and Symptoms in Clinical Medicine." The book was written with the object of providing a short but comprehensive survey of the human nervous system, also to furnish a unified concept of structure and function which will be of practical value in understanding the working mechanisms of the brain and spinal cord. The viewpoints of neuroanatomy, neurophysiology, and clinical neurology are combined and used freely, not with the intent of covering these fields exhaustively, but in the belief that a more discerning approach to the study of the nervous system can be obtained by bringing together all three facets of the subject. Basic information is presented in concise form. The planning and arrangement of the chapters are such that full topics can be covered rapidly. The format is designed for the basic needs of both the medical student and the physician who wishes to review the nervous system efficiently.

The Care of the Geriatric Patient. Edited by E. V. COWDRY, with 22 contributors. St. Louis: The C. V. Mosby Co., 1958. 417 pp. $8.00.

This book is addressed primarily to the physician in his role of guide, philosopher, and friend to the aged. It is an outline of a symposium held by the Los Angeles County Medical Association in the summer of 1955. The first five chapters of the book are from the original five parts of this symposium, the material revised and brought up to date by the authors. To these, fourteen other chapters have since been added. Throughout the book attention is focused not on past developments, nor on help which may become available in the future, but on what is and can be supplied to physicians today.

Epilepsy. By MANFRED SAKEL. New York: The Philosophical Library, 1958. 204 pp. $5.00.

This book is a companion piece to *Schizophrenia* by the same author. The manuscript of the present work was not finished at the time of the death of Dr. Sakel. However the publishers felt that the author's interesting ideas and observations should be preserved in their original form, and therefore the book was published unrevised and unaltered by the original author.

Association of American Medical Colleges

MINUTES

OF THE PROCEEDINGS

Sixty-Ninth Annual Meeting

October 13, 14, 15, 1958

Philadelphia, Pennsylvania

Officers of the Association and Members of the Executive Council

1957–1958

President and Council Chairman: LOWELL T. COGGESHALL
University of Chicago School of Medicine
President-Elect: JOHN MCK. MITCHELL . . . University of Pennsylvania School of Medicine
Vice-President: JOSEPH T. WEARN . . . . . Western Reserve University School of Medicine
**Acting Treasurer:* RICHARD H. YOUNG . . . . . Northwestern University School of Medicine
Immediate Past President: JOHN B. YOUMANS . . . Vanderbilt University School of Medicine
Secretary: RICHARD H. YOUNG . . . . . Northwestern University School of Medicine
Executive Council, 1960: STANLEY W. OLSON . . . . . Baylor University College of Medicine
Executive Council, 1960: THOMAS H. HUNTER . . . University of Virginia School of Medicine
Executive Council, 1959: MARK R. EVERETT . . University of Oklahoma School of Medicine
Executive Council, 1959: GORDON H. SCOTT . . Wayne State University College of Medicine
Executive Council, 1958: JOHN F. SHEEHAN . . Stritch School of Medicine, Loyola University
Executive Council, 1958: JOHN Z. BOWERS . . . . . University of Wisconsin Medical School

Staff

WARD DARLEY . . . . . *Executive Director*
LELAND E. POWERS . . . . . *Associate Director*
TOM COLEMAN . . . . . *Director of Public Relations*
HELEN H. GEE . . . . . *Director of Research*
ROBERT J. GLASER . . . . . *Assistant Secretary*
VERNON E. WILSON . . . . . *Assistant Secretary*
JOHN A. D. COOPER . . . . . *Assistant Secretary*

* Appointed Acting Treasurer in January following the death of Stockton Kimball, Dean, University of Buffalo School of Medicine.

Sixty-Ninth Annual Meeting

Association of American Medical Colleges

Sheraton Hotel, Philadelphia, Pa.

October 13-14-15, 1958

MONDAY, October 13, 1958

TUESDAY, October 14, 1958

Monday, October 13, 1958

Lowell T. Coggeshall, M.D., Presiding

INTRODUCTION OF NEW DEANS

The following new medical school deans were introduced:

Ernest Witebsky, Acting Dean.....Buffalo
Houston H. Merritt, Acting Dean...Columbia
Hugh H. Hussey.....Georgetown
William A. Sodeman.....Jefferson
Robert B. Howard.....Minnesota
Francis S. Cheever.....Pittsburgh
Robert H. Alway.....Stanford
Carlyle F. Jacobsen.....SUNY, Syracuse
M. K. Callison.....Tennessee
John W. Patterson.....Vanderbilt
Edward W. Dempsey..Washington University
George B. Koelle
Pennsylvania Graduate School

INTRODUCTION OF VISITORS FROM FOREIGN MEDICAL SCHOOLS

The following visitors from foreign countries were introduced: Dr. O. E. R. Abhayaratne, Dean of Faculty of Medicine, University of Ceylon; Dr. Ramon Ortuzar, Head of the Department of Medicine, Catholic University of Chile, at Santiago; Dr. Tadao Toda, Kyushu University Medical School, Japan; Dr. Svasti Daengsvang, Director General, Department of University of Medical Sciences, Ministry of Public Health, Bangkok, Thailand; Dr. D. P. Soedjono, Professor of Pediatrics and Dean of the Medical Faculty, University of Indonesia, Djakarta; Dr. Jacobus Carolus Kapitan, Dean of the Medical Faculty, University of Airlangg, Surabaja, Indonesia; Dr. Antonio Pena-Chavarria, Dean of the Medical School, University of Costa Rica; Dr. Magid Iunes of Brazil; Dr. Alberto Duque, University Javeriana, Bogota, Columbia.

CHANGES IN AAMC BY-LAWS

In accordance with the "Articles of Incorporation and By-Laws of the Association of American Medical Colleges," the following modifications of the By-Laws of the Association were approved by the Executive Council and the Institutional Members. The By-Laws (section 11) require a 2/3 favorable vote of the Institutional Members present at any meeting of Institutional and Affiliate Members for which thirty days written notice has been given.

The revisions are indicated by *italicized* new words or phrases; those words indicated in brackets are deletions.

SECTION 1. No revision

SECTION 2. No revision

SECTION 3. It is proposed that Section 3 be repealed and the following substituted.

Section 3. *Emeritus*, Individual and Sustaining Membership. There shall be *three* classes of members, known as *Emeritus Members*, Individual Members and Sustaining Members composed of persons, including corporations, who have demonstrated over a period of years a serious interest in medical education. After their qualifications have been approved by the Executive Council, they shall be elected in the same manner as Institutional Members. They shall have the privileges of the floor in all discussions but shall not be entitled to vote. The first individual members shall be those persons who were on January 1, 1955 Individual Members of an unincorporated voluntary association called Association of American Medical Colleges.

(a) *Emeritus Membership. Emeritus Membership shall be reserved for those faculty, deans and other administrative officers of medical schools and universities, who have demonstrated unusual capacity and interest in dealing with the problems and in contributing to the progress of medical education, and who, because of the retirement policies of their medical school or university, are no longer active in medical education. Any institutional, affiliate, emeritus, individual or sustaining member may nominate any person for Emeritus Membership. Nominations shall be directed to the Executive Council. After approval of qualifications by*

the Executive Council, Emeritus Members shall be elected in the same manner as Institutional Members. Emeritus Members shall not pay dues; they shall have the privileges of the floor in all discussions but shall not be entitled to vote.

(b) Individual Membership. The Individual Member may be any person who has demonstrated over a period of years a serious interest in medical education. After their qualifications have been approved by the Executive Council, they shall be elected in the same manner as Institutional Members. They shall have the privileges of the floor in all discussions but shall not be entitled to vote.

(c) Sustaining Membership. The Sustaining Member may be any person, including corporations, who has demonstrated over a period of years a serious interest in medical education. After their qualifications have been approved by the Executive Council, they shall be elected in the same manner as Institutional Members. They shall have the privileges of the floor in all discussions but shall not be entitled to vote.

SECTION 4. No revision

SECTION 5. It is proposed that Section 5 be repealed and the following substituted:

Section 5. Officers. The officers shall be a President, a President-Elect, a Vice-President, an Executive Director, a Secretary and a Treasurer. The President-Elect, Vice-President, *Secretary* and Treasurer shall be elected for one-year terms at the annual meeting of members, the President-Elect to become President upon his installation in the course of the annual meeting a year after he has been elected. Any officer may be removed by the membership whenever they deem it to be in the best interest of the Association.

The Executive Director [and the Secretary] shall be appointed by the Executive Council.

The remainder of Section 5 is unchanged.

SECTION 6. It is proposed that Section 6 be repealed and the following substituted:

SECTION 6. Executive Council.

(a) No revision

(b) The Council shall consist of six elected members, five elected officers ***and the Immediate Past President who shall be ex-officio members with voting rights and the Executive Director who shall be an ex-officio member without voting rights.***

(c) No revision

(d) The ex-officio voting members shall consist of the elected officers and the Immediate Past President during the year after he was President. The Executive Director [and the Secretary] shall be *the only* [ex-officio] member[s] without vote but shall attend all Council meetings, except closed executive sessions.

The remainder of Section 6 is unchanged.

SECTIONS 7 thru 12. No revision

INSTITUTE HIGHLIGHTS

The summary of the 1958 Teaching Institute "The First Institute on Clinical Teaching," held at Swampscott, Massachusetts, October 8–11, was presented by Drs. George Packer Berry, Julius B. Richmond, Stewart G. Wolf, Jr., Charles G. Child, III, and Charles A. Janeway.

OPEN HEARINGS ON ANNUAL REPORTS OF COMMITTEES

Open hearings on the Annual Reports of all of the Association's standing committees were held.

BORDEN AWARD

Dr. Severo Ochoa, professor of biochemistry, New York University College of Medicine, was presented the 1958 Borden Award in the Medical Sciences for his work on the enzymatic synthesis of ribonucleic acid. The Award, a gold medal and $1000, was presented by Dr. Vincent du Vigneaud, Chairman of the Committee on the Borden Award.

ABRAHAM FLEXNER AWARD

Dr. Joseph C. Hinsey, Director, New York Hospital-Cornell Medical Center, was presented the first Annual Abraham Flexner Award for outstanding Service to Medical Education. The Award was presented by Dr. Ralph C. Syvertsen, Chairman of the Committee on the Flexner Award, with the following comments:

"Now, by the authority vested in me by the Council, Mr. President, I am happy to present to you the first recipient of the Award, Joseph

Clarence Hinsey. Born in Ottumwa, Iowa, shortly after the turn of the century, educational product of Iowa Wesleyan College, Northwestern and Washington Universities, member of Phi Beta Kappa, Alpha Omega Alpha and Sigma Xi, successively on the faculties of Northwestern, Western Reserve, Washington, and Stanford Universities, professor and head of the Department of Physiology and Anatomy at Cornell, then dean and finally director of the New York Hospital-Cornell Medical Center, member of the President's Commission on Medical Needs of the Nation and of the boards of trustees of Memorial Hospital, Sloan-Kettering Institute, China Medical Board and Cornell University, contributor to and editor of scientific publications, member and officer in many learned societies, expert in interpersonal relations, special pleader in Washington for the cause of medical education, famous for his altruistic devotion to good works, esteemed colleague and friend of us all, and most important, as far as this organization is concerned, Vice-President, President and Chairman of the Executive Council during eight crucial years when his leadership was paramount both inside and outside the Association, in its growth in dimension and influence throughout the nation and the world."

THE ALAN GREGG LECTURE

Highlight of the Annual Banquet was the delivery of the first Alan Gregg Lecture by Dr. James Conant, President Emeritus of Harvard University. The title of Dr. Conant's lecture was "Education for the Professions in Europe and the United States."

Tuesday, October 14, 1958

ROLL CALL

All Institutional Members were represented.

APPROVAL OF MINUTES OF 68TH ANNUAL MEETING

The minutes of the 68th Annual Meeting, October 21, 22, 23, 1957, Chalfonte-Haddon Hall, Atlantic City, New Jersey, were approved as published.

INSTITUTIONAL MEMBERSHIP

The University of Florida College of Medicine, Albert Einstein College of Medicine and Seton Hall College of Medicine were voted into full Institutional Membership.

INDIVIDUAL MEMBERS

A total of 734 new Individual Members were voted into the Association.

EMERITUS MEMBERSHIP

Dr. Willard C. Rappleye, former Dean of Columbia University College of Physicians and Surgeons, and Dr. John B. Youmans, former Dean of Vanderbilt University School of Medicine, were unanimously voted the first Emeritus Memberships in the Association.

Report of the Chairman of the Executive Council

The report of the Chairman of the Executive Council was limited to the most important of the past year's Council actions and to those matters which the Council felt should be referred to vote of the Association.

First, the Council decided to make an all-out effort to secure passage of a measure that would provide federal matching funds for the construction of educational facilities. The attempt failed, but the Research Facilities Construction Act was renewed for another three years, $30 million per year.

In relation to increasing indirect costs, this was approved by the Senate Conference Committee but rejected by the House Conference on two bases; one, that there was an inter-agency study group about to prepare a report on adequate provisions for indirect support, and two, since some of the voluntary health agencies were paying no more than fifteen per cent, they felt that government agencies should not move ahead.

The report of the Inter-agency Study Committee on Indirect Costs, briefly chaired by President Killian of MIT and now by Dr. Lee DuBridge of Cal Tech, has been released. In essence it says that each university shall establish with the federal agencies a rate for indirect

costs that is compatible with their particular method of accounting. The differences in rates in many universities are attributed to the fact that certain items are included in one university as direct costs and not in others. It is hoped that there will be a standard rate for each university per each governmental agency. It is hoped that this will prove satisfactory to all concerned.

Second, the Council authorized the Executive Director to initiate a revision of the Association's budgeting, purchasing and accounting procedures. This has been done under the direction of Mr. A. J. Carroll, Business Officer, Upstate Medical Center, State University of New York, Syracuse. We are indebted to Mr. Carroll not only for this but for several other studies that he is making. In fact, an economist that spoke at Swampscott said that as far as he was concerned, the studies conducted by Mr. Carroll were more illuminating than many he had seen from economists for the same purpose.

Third, in the interests of maintaining the best possible medical education in the face of growing international tension, the Council authorized the formation of a planning group to be known as the Liaison Committee on Medical Education for National Defense. The Executive Council of the Association of American Medical Colleges and the American Medical Association's Council on Medical Education and National Defense are the participating agencies.

Fourth, the Council authorized the AAMC to participate in the annual questionnaire of the Liaison Committee on Medical Education.

Fifth, the Council authorized that the following statement be sent to the Department of Defense, regarding the 1959 Doctor Draft Act: "The AAMC endorses the extension of the existing Universal Military Training Service Act for a period of two years starting July 1, 1959, through June 30, 1961, and it urges Congress, in enacting such a law, to include a provision authorizing the National Advisory Committee to consider and advise on all requests for deferment of medical faculty members who are joined in such a request by their medical school, and to include a further provision authorizing the National Advisory Committee to establish, when necessary, Regional Advisory Committees made up of representatives of the medical schools in the regional areas designated, to assist in carrying out its task of reviewing and advising on such deferment requests."

Sixth, the Council joined the AMA in setting 1960 as the date when the list of so-called approved foreign medical schools would become invalid as a measure of a foreign medical graduate's qualification for internship or licensure examinations in the United States. Screening by the Educational Council of Foreign Medical Graduates will be substituted.

Seventh, the Council approved important staff appointments as follows: Dr. Leland Powers, former Associate Dean, Faculty of Medical Sciences, American University of Beirut, and before that Chairman, Department of Preventive Medicine, University of Washington, as Associate Director; Mr. Tom Coleman as Director of Public Relations; Mrs. Lotus R. Barnes, Assistant to the Executive Director.

Eighth, the Council voted approval of the first two years of programs at the University of Florida, Albert Einstein and Seton Hall Colleges of Medicine, thus making them eligible for Institutional Membership in the Association.

Ninth, the Council approved the statement of "Functions and Structure of a Modern School of Basic Medical Sciences" and recommended it to the Association for adoption.

The motion was made, seconded, put to a vote and was carried.

Tenth, the Council decided to discontinue participation in Medical Education Week.

Eleventh, the Council accepted the following new grants, which does not include grants made in previous years that are still active:

The Markle Foundation, $50,000 for three years, general support.

The Macy Foundation, $10,000 annually for three years in support of the Journal of Medical Education.

The W. K. Kellogg Foundation, $75,000 to make an internship survey in the medical school teaching hospitals of this country.

The Kellogg Foundation, $35,000 for a medical school cost study.

Rockefeller Foundation, $500 for foreign journal subscriptions.

National Foundation, $10,000 for a directory of medical fellowships, outlining the medical fellowships available in this country. The American Heart Association, $1,000 for this purpose.

The Institute of Neurological Diseases and Blindness, $10,000 for the 1958 Teaching Institute.

The Abbott Laboratories, $10,000 for film production.

Twelfth, the Council approved publication of the "Study of Medical Colleges Costs" by Mr.

Carroll. With this report in hand, the Association, with the aid of a grant from the W. K. Kellogg Foundation, will proceed with the development of a plan that will lead to a program of periodic programs on cost reporting. In his study, Mr. Carroll has rendered medical education a very important service, and the Council proposes the following resolution for approval of the Association:

Whereas, the responsibilities and complexities of teaching medical centers have made cost analysis and reporting on a comparable basis most difficult; and

Whereas, development of such information to permit fiscal understanding is a maior problem facing medical education; and

Whereas, Mr. Carroll, Business Manager, Upstate Medical Center, State University of New York, Syracuse, has shown that the fiscal operations of our teaching medical centers are capable of cost analysis and of reduction to common denominators essential for reasonable comparison; and

Whereas, his "Study of Medical College Costs" based on the survey of nineteen medical schools will furnish medical school administrators, university presidents and governing boards, legislators and deans interested in medical education a better understanding and appreciation of the cost of medical education;

Now therefore be it

RESOLVED, That the Association of American Medical Colleges express its sincere appreciation to Mr. Augustus J. Carroll for promoting a vitally-needed service in developing a method and program of cost analysis in the field of medical education.

The motion was seconded, was put to a vote and was carried.

Thirteenth, the Council has made preliminary reservations for the 1961 and 1962 meetings as follows:

> 1961, Queen Elizabeth Hotel in Montreal, October 23–25.
>
> 1962, the Association will move to the West Coast, and preliminary reservations have been made at the Ambassador, Los Angeles, for October 29–31.

A motion to approve both meeting sites was seconded, put to a vote and was carried.

As previously approved, the 1959 meeting will be held at the Edgewater Beach Hotel, Chicago, November 2–4. In 1960, at the Diplomat Hotel, Hollywood Beach, Florida, October 31–November 2.

Fourteenth, the Council developed the following statement for approval of the Association:

"The medical school administrators of the United States and Canada are aware of the pressing need for factual data that will elaborate the teaching, research and service aspects of their many responsibilities.

"To the end that this can proceed in an orderly and efficient manner, and to the end that data already developed may be used to the fullest extent possible, and also to the end that the medical schools not be approached with unimportant or poorly conceived questionnaires and surveys, the institutional members of the AAMC direct the Executive Council to establish the procedures whereby consultation and, where indicated, liaison, can be established with agencies or individuals that have already developed or may wish to develop such data.

"In order to facilitate this assignment, it is recommended to the institutional members that the completion of questionnaires or cooperation with surveys be limited to those that have been justified and approved by the Executive Council, and that all questionnaires and surveys that have not been so approved be referred to the Association office so that contact with the agency or agencies or individual or individuals concerned can be established. Further, it is recommended that insofar as possible, acceptable questionnaires and survey studies be incorporated within the framework of existing mechanisms and methods of the AAMC and the Liaison Committee on Medical Education, or within the periodic program and cost accounting project that is currently being developed under the direction of Mr. A. J. Carroll."

The motion was made, seconded, put to a vote and was carried.

Fifteenth, the Council also concerned itself, largely through the requests, inquiries and comments of many of the institutional members, about the increasing tendency towards greater activity on the part of many pharmaceutical concerns to enter the field of medical ecuation. In view of this situation, the Council developed the following statement for consideration and approval by the deans.

Whereas, the Executive Council of the AAMC is deeply concerned over the increasing trend of the ethical pharmaceutical industry to approach medical schools through a varied program of questionable educational value, i.e., certain kinds of awards, lectureships, prizes, plant visitations, television production, printed matter, student parties

and other activities of a promotional nature; and

Whereas, the Executive Council recognizes the strong interest and deep concern of the pharmaceutical industry for the present and future welfare of medical education, as well as the industry's significant contribution to medical schools in the past; and

Whereas, assistance to medical education must be clearly separated from the industry's promotional and advertising campaigns if it is to be of significant and enduring value; and

Whereas, the pharamaceutical industry recognizes that no group stands to gain more from free medical education than do those ethical houses concerned with the production and marketing of drugs and pharmaceuticals; therefore be it

RESOLVED, That the Association of American Medical Colleges seek the opportunity to meet with the leaders of the ethical pharmaceutical industry to discuss their present programs of questionable value and strive for the development of a sound program of industry support which provides contributions that are more direct and of greater value to medical education, and that such support be channeled through the National Fund for Medical Education.

The motion was made, seconded, put to a vote and carried.

Sixteenth, the Council presented Colonel Richard H. Eanes with a plaque upon which was engraved the following statement:

"The Association of American Medical Colleges extends to Colonel Richard H. Eanes, Medical Corps, United States Army, this award of appreciation for outstanding service to the cause of medical education during his tenure as Chief Medical Officer to the Selective Service System from 1941 to 1958; conscientious study of the manpower requirements of the medical schools of our country and diligent effort to protect qualified students and essential teachers from multiple demands for their services by other agencies; unfailing courtesy and judicious advice to all who sought his counsel in the handling of individual deferment problems; and that kindly spirit of fairness and good will which has won for him a host of friends among the medical educators of this country. Given to him in Philadelphia here at the Annual Meeting on October 11, 1958."

The motion was made, seconded, put to a vote, and was carried.

Seventeenth, finally, the Council completed arrangements whereby regular, periodic discussions regarding the AMA-AAMC relationships over the next few years will be held. Representatives of the AMA Board of Directors, AMA Council on Medical Education and Hospitals, and the Executive Council of the AAMC and selected university presidents will constitute the discussion group.

Mr. Chairman, this concludes the formal report, and I recommend to you the adoption of the report as a whole.

The motion was made, seconded, put to a vote and was carried.

Lowell T. Coggeshall
Chairman, Executive Council

Report of the Executive Director

The report this morning will be extremely brief.

First, I want to call your attention to plans for the Directory of the Association, which I hope will be off the press some time during January. The Directory should be more useful than has been the case in the past. A historical note regarding each school will head each section. This will be followed by a listing of the administrative officers of the university and the medical school. Instead of the usual symbols, the position of each administrative officer will be spelled out.

The individual members will again be listed according to schools, along with the academic rank and the department to which each belongs.

I also want to emphasize that Dr. Coggeshall's report listed only those new grants that had been accepted this year. It is important to remember that the Association has received many other grants, accepted in previous years, that are still active. And I refer here particularly to the grant from the Commonwealth Fund which helps support the research program of the Association and also the grants from the Commonwealth Fund and the National Institutes of Health that support the teaching institutes.

I think that what has been happening in the Association during the past year will be abundantly apparent from the report of the Executive Council which you have just heard, from the committee reports you received when you registered for this meeting and from the supplemental reports you will hear very shortly.

During the present series of Executive Council meetings, many hours of discussion have

been given to the financial and related problems of medical education. During the next few months it is planned that the staff will develop the working papers essential to a very concerted look at the long-range aspects of financing medical education. This problem must be carefully analyzed from the standpoint of the students, the faculties, the teaching hospitals and the universities as well as from the standpoint of the medical schools themselves. Every conceivable source of income must be reviewed, particularly income from medical school service programs and research. The obstacles to the proper income from these sources must be removed or circumvented.

Recent developments are germane to this effort. I refer here to such things as the report of the President's Commission on Education Beyond the High School; the report that has been developed by the Rockefeller Fund; the report from the Bayne-Jones Committee; the Carroll analysis of medical college costs in nineteen schools; the Emory University study of its costs; and finally, certain studies that are currently in process: postdoctoral education in the medical sciences under the direction of Dr. Arthur S. Cain, Jr., about which you will hear this afternoon; another study by the National Science Foundation which will bring up-to-date the financial picture in research, particularly its direct and indirect costs; and also a study of twenty schools in order to ascertain the impact of the first ten years of the training and research grants of NIH on medical education.

All of this activity makes it imperative that the Association strengthen its own investigations of the structure and function of medical education. The program of cost reporting and the survey of the internship in medical school-affiliated hospitals are two important steps in this direction. We must do more.

The research being planned is just as important to each medical school individually as it is to the medical schools collectively. Our effort will succeed only in proportion to the extent to which the schools can cooperate. We anticipate that while this will be a busy year, it will also be a profitable one. I can assure you that the Council will take great care to keep the membership informed of developments as they may take shape, and, in line with this, I will plan to have an extended report in your hands so that it can be discussed at the February meeting.

Ward Darley
Executive Director

Report of the Secretary

Medical School Surveys

During the 1957–58 academic year, fifteen medical schools were surveyed and reports rendered by the survey teams representing the Association of American Medical Colleges and the Council on Medical Education and Hospitals of the American Medical Association. The surveyed schools were:

University of Kentucky School of Medicine
Dalhousie University Faculty of Medicine
Dartmouth Medical School
University of Manitoba Faculty of Medicine
Johns Hopkins University School of Medicine
University of Pittsburgh School of Medicine
College of Medical Evangelists
Woman's Medical College of Pennsylvania
Seton Hall College of Medicine
Albert Einstein College of Medicine of Yeshiva University
Georgetown University School of Medicine
University of Chicago School of Medicine
University of Florida College of Medicine
University of Arkansas School of Medicine
University of Michigan Medical School

The visitation scheduled for 1958–59 will include twelve medical schools:

University of Ottawa Faculty of Medicine
Jefferson Medical College
Vanderbilt University School of Medicine
Yale University School of Medicine
Bowman Gray School of Medicine of Wake Forest College
University of Colorado School of Medicine
Columbia University College of Physicians and Surgeons
Stritch School of Medicine of Loyola University
Albert Einstein College of Medicine of Yeshiva University
University of Kansas School of Medicine
Washington University School of Medicine
Creighton University School of Medicine

The Assistant Secretaries will be Robert J. Glaser, John A. D. Cooper and Vernon E. Wilson.

It is the intention of the Liaison Survey Committee of the Association and the Council on Medical Education and Hospitals of the AMA to visit each member institution once in ten years. In newly developing schools, mandatory visits occur during the second and fourth years of development, and visits during intervening years are arranged only when specifically requested by the developing school or when the Councils have reason for being concerned about the program being developed. All visitations are to be considered as a consultation rather than an inspection. The visited institutions have been appreciative of the Liaison Committee's appraisals and recommendations.

A survey team consists of four or five persons. Two individuals must represent the Council of Medical Education and Hospitals of the AMA, one being the Secretary or Associate or Assistant Secretary of the Council, and the other being a member of the Council. Two individuals represent the Association of American Medical Colleges, one being the Assistant Secretary or the Secretary, and the other being a dean, who is usually a member of the Executive Council. A representative of the Regional Accreditation Association is also often invited by the surveyed university. This individual acts as a "generalist" and consultant.

The survey team is furnished a comprehensive pre-survey questionnaire report by the visited school. Each visitation occupies three-and-a-half to four days, and responsibility for the conduct of and writing of the Liaison Survey reports is alternated between the Association of American Medical Colleges and the Council on Medical Education and Hospitals.

The extensive and comprehensive report of the visitation is mimeographed and circulated to all members of the Executive Council of the AAMC, and to members of the Council on Medical Education and Hospitals of the AMA. A mail vote for approval or disapproval is rendered. If the vote by the Executive Council is unanimous, the report of the survey is released to the medical school and university officials concerned, for comment and correction. At the next meeting of the Liaison Committee, formal action is taken, and a letter of communication is sent to the president of the surveyed university and the dean of the medical school, signed jointly by the secretaries of the two groups. Schools are approved—or not approved—or placed on confidential probation.

AAMC Memberships

There are now 86 institutional members, with the addition of the three voted in this morning; 13 affiliated institutional members——12 Canadian schools and the University of the Philippines—4 graduate medical schools, 8 sustaining members, and 2097 individual members, of which 889 were new members this year.

Richard H. Young
Secretary

Report of the Treasurer

Dr. Richard Young, Acting Treasurer, presented a summary of the financial operations of the Association over the past year as follows. The report was based on an audit by the firm of Horvath and Horvath.

Treasurer's Report 1957–58
Summary Statement

	General Fund	Restricted Funds	Total
Balances at beginning of year—July 1, 1957	$ 154,191.74	$ 162,030.05	$ 316,221.79
Receipts for the year	294,575.31	207,601.90	502,177.21
	$ 448,767.05	$ 369,631.95	$ 818,399.00
Net amount transferred from restricted funds to general fund	+18,358.20	−18,358.20	.....
	$ 467,125.25	$ 351,273.75	$ 818,399.00
Disbursements for year	349,998.81	173,034.53	523,033.34
Balances at end of year—June 30, 1958	$ 117,126.44	$ 178,239.22	$ 295,365.66
Net change in balances during the year	$−37,064.30	$+16,209.17	$−20,854.13

Details of Income for 1957–58

	General Fund	Restricted Funds	Total
Income from Regular Operations			
Dues—Institutional	$ 83,125.00		$ 83,125.00
Dues—Individual	16,319.45		16,319.45
Dues—Sustaining	5,000.00		5,000.00
Dues—International Cooperation Administration	26.00		26.00
Interest	3,426.00		3,426.00
Medical College Admission Test Program	49,670.23		49,670.23
Overhead on Grants	1,387.41		1,387.41
Journal advertising	44,537.78		44,537.78
Journal subscriptions	7,033.07		7,033.07
Publications	21,230.87		21,230.87
Sales of Services	2,820.00		2,820.00
Total Income from Regular Operations	234,575.81		
Gifts and Grants for Regular Operations			
Markle Foundation (for developing the Association)	50,000.00		50,000.00
Josiah Macy, Jr. Foundation (for improving the Journal)	10,000.00		10,000.00
Total Gifts and Grants for Regular Operations	(60,000.00)		
Grants for Special Projects and Restricted Earnings			
Nat'l Assn. for Infantile Paralysis (for Fellowship Directory)		$ 10,000.00	10,000.00
Commonwealth Fund—			
Aptitude, Interest and Personality Research		25,000.00	25,000.00
For services to member schools		25,000.00	25,000.00
University of California—for report on Aptitude, Interest and Personality Studies		4,500.00	4,500.00
Refunds to restricted grants		1,091.03	1,091.03
Abbott Laboratory—for producing new films		5,000.00	5,000.00
Film sales and rentals—for support of Audio-Visual Institute		12,010.87	12,010.87
W. K. Kellogg Foundation—			
For study of Medical College Financing		35,000.00	35,000.00
For Intern Study		46,000.00	46,000.00
John and Mary Markle Foundation—For Severinghaus Study		44,000.00	44,000.00
Total Income	$294,575.81	$207,601.90	$502,177.71

Details of Disbursements for 1957–58

	General Fund	Restricted Funds	Total
For Regular Operations			
Salaries and Annuities	$177,983.76		$177,983.76
Supplies, postage, telephone, telegraph	31,583.02		31,583.02
Furniture and Equipment	2,913.46		2,913.46
Travel	28,218.27		28,218.27
Insurance	832.24		832.24
Contingency	1,639.39		1,639.39
Contracted services and machines (IBM)	29,010.41		29,010.41
Publications	1,999.87		1,999.87
Annual Meeting	5,442.57		5,442.57
Promotion materials	305.19		305.19
Journal printing	39,680.38		39,680.38
Other printing	16,208.30		16,208.30
Mailing	2,556.50		2,556.50
Engraving	538.17		538.17
Spanish translations	384.00		384.00
Heat, light and power	10,703.28		10,703.28
For Special Projects			
Film costs and expenses (for Audio-Visual Institute)		$ 20,682.94	20,682.94
Foreign subscriptions to Journal (China Medical Board)		2,600.00	2,600.00
Restricted Fund Expenses—			
Study of Medical College Financing (W. K. Kellogg Foundation)		67.60	67.60
Intern Study (W. K. Kellogg Foundation)		360.13	360.13
Severinghaus Committee Study of PreProfessional Education in Liberal Arts Colleges (John & Mary R. Markle Foundation)		22,268.54	22,268.54
Programs of the Committee on Education and Research Studies including teaching institutes—			
Commonwealth Fund Grants (4)		39,178.95	39,178.95
Dept. of Health Education & Welfare Grants (2)		28,955.77	28,955.77
John & Mary R. Markle Foundation Grant (for Aptitude, Interest and Personality Studies)		10,612.83	10,612.83
Building and Land		48,307.77	48,307.77 (a)
Total Disbursements	$349,998.81	$173,034.53	$523,033.34

(a) This expenditure of $48,307.77 is the final payment on the AAMC building in Evanston which is now carried on the Assn. books as a fixed asset valued at $287,429.79.

Joint Report of the Committee on Research and Education and the Director of Research

Committee Organization

In 1953, at the 64th annual meeting of the Association of American Medical Colleges in Atlantic City, New Jersey, the Committee on Teaching Institutes and Special Studies was formed by combining the existing Committee on Teaching Institutes and the Committee on Student Personnel Practices. From that time forward to 1957, when the 68th annual meeting was held, again in Atlantic City, Dr. George Packer Berry served as chairman. (In 1955 the Committee had been renamed the Committee on Educational Research and Services.) Dr. Berry served the Association as much more than the chairman of a committee during this period. He was the intellectual leader, counselor, and intercessor who fostered the development within the Association of both the staff and committee functions involved in many major contributions to medical education.

The teaching institute program, which Dr. Berry originally proposed in 1952 in his presidential address, "Medical Education in Transition," has become a guide to the review and development of present-day medical education. The program has flourished under Dr. Berry's continued inspiring leadership. Evidence of the impact of the teaching institutes on medical education, in the United States as well as abroad, is widely apparent—in the activities of both individual medical schools and scientific societies related to medicine. The American example was an important motivating force in establishment this year of the Society for the Study of Medical Education in Great Britain. This British association brings the 24 medical schools together for the first time. In this country, our medical schools are working together as never before toward the solution of common problems. An instance is the permanent committee mechanism which evolved out of the 1956 Teaching Institute to facilitate the cooperative study of, and action on, the personnel problems of medical students. (This activity is discussed in detail in the section headed, "Continuing Group on Student Evaluation," which appears later in the present report.)

In addition to the program of institutes, Dr. Berry's leadership has been no less important to the growth of the Association's research program. In its accumulation of information about all aspects of medical education— from bricks and mortar to the personality characteristics of medical students—and in its functions that range from informational services through consultation with schools and agencies on experimental design and analysis to the study and investigation of methodological problems in test theory, the research program is unique in higher education. Aside from the ultimate substantive contributions that these research efforts may themselves make is the potential value of the research that they stimulate in individual schools and in outside agencies. Although he claims no competence in the methodology of psychological and survey research, Dr. Berry's perceptive insight is clearly evident in the successful development of these activities during his tenure as chairman of the AAMC Committee on whose behalf the professional research staff at the AAMC has functioned. Details of the development and expansion in Committee activities that occurred during the period of Dr. Berry's chairmanship are given in the annual reports of the Committee, published each year in the proceedings of the annual meetings of the Association that appear in the *Journal of Medical Education*.

Although Dr. Berry was forced by the growing demands being made upon him, both nationally and locally at the Harvard Medical School, to decline reappointment as chairman of this Committee, he continues to serve as a member and is still devoting much time and effort to its activities.

The Committee and the AAMC research staff take this opportunity to thank Dr. Berry for the opportunity of working with him toward the development and improvement of medical education.

Dr. Carlyle F. Jacobsen, dean of the State University of New York College of Medicine at Syracuse, New York, was named chairman of the Committee at the 68th annual meeting of the Association. To mark this event, and to reflect the growing contributions to higher education that the Committee's work is making possible, the Committee was retitled the Committee on Research and Education. Dr. Jacobsen is not new to the Committee, having served as chairman of one of the present Committee's predecessors, the Committee on Student Personnel Practices, and as a member of the Committee on Educational Research and Services. It was during Dr. Jacobsen's earlier tenure on

this Committee that modernization and expansion of AAMC research office activities was begun.

At the 68th annual meeting also, the Subcommittee on Evaluation and Measurement was abolished and a more flexible method of assigning responsibility to the Committee membership was adopted. Three significant areas of Committee interest have been defined: teaching institutes, basic research, and student personnel practices. Dr. Robert J. Glaser, Dr. William Schofield, and Dr. John L. Caughey, Jr., respectively, were assigned the major responsibility for activities in these areas during 1957–58. The practice has been established of calling upon small subgroups of the Committee's membership for consultation on problems related to their special areas of competence and interest.

Finance

The Committee's activities, excluding the teaching institute program, have been supported during the past year by grants from The Commonwealth Fund and the John and Mary Markle Foundation and by the Association's general funds. Research and service activities expenditures amounted to nearly $124,000 for the year. Although total expenditures are within the amounts originally budgeted for the year, the treasurer's report will show a substantial budgetary deficit. This bookkeeping deficit is an unavoidable circumstance brought about by the complete revision of the system of budgetary methods and controls in which the Association is being most ably and graciously assisted by Mr. Augustus J. Carroll.

Although total sales of the 1957–58 *Admission Requirements* were slightly decreased from the previous year (owing most probably to the fact that fewer expenditures were made for promotion and also to a change in the system of dating the publication, which resulted in successive issues being indicated as the 1957 and the 1957–58), the dollar volume of sales has increased (possibly due to fewer quantity discount orders). Publications sales for 1957–58 grossed nearly $16,900. It is pleasing to report that circulation of the 1958–59 *Admission Requirements* is running well ahead of last year.

Major emphasis must be placed at once upon securing new sources of grant support for the continuation and expansion of the Committee's research and service functions. The successful development of both types of activity has resulted in substantially increased demands upon the AAMC research office staff and facilities. Indeed, professional staff time has already become seriously overcommitted. It is imperative to the realization of the Committee's goals, therefore, that sufficient funds be found not only to continue operations at the present level, but to permit an increase in the size of the professional staff and in other aspects of capacity for meeting the needs of research and service.

The teaching institute program continues to receive generous support from both The Commonwealth Fund and the National Institues of Health. In addition to the initial grant of $25,000 received this year from the National Institute of Neurological Diseases and Blindness for the 1958 Teaching Institute, a supplementary grant of $10,000 was awarded to cover the substantially increased cost of planning for the current meeting. The National Institute of Mental Health and the National Heart Institute have committed funds for support of the 1959, and the 1960 and 1961 teaching institutes respectively. The Commonwealth Fund has also expressed interest in continued support of the teaching institutes, although no funds have been committee beyond the 1958 program.

It is again a sincere pleasure to express the gratitude of the Committee and the Association's office of the director of research to The Commonwealth Fund, the John and Mary Markle Foundation, and the National Institutes of Health for their continuing interest in, and generous support of, the Committee's activities.

Teaching Institutes

The 1958 institute, the AAMC's sixth institute and the First Institute on Clinical Teaching was held October 7–11 at Swampscott, Massachusetts.[1] Dr. Julius B. Richmond is chairman.

The difficulties that medical schools and their faculties encounter in teaching the basic medical sciences and in handling student personnel problems are basically similar to those that are encountered in higher education by most other disciplines. The problems of the clinical teaching program, however, are comparatively *sui generis*

[1] Chronology of the institute series is given in the 1955 annual report of this Committee, published in the December 1955 issue of the *Journal of Medical Education*. Background of the 1956 and 1957 institutes is reported in the 1956 report, published in the January 1957 issue of the *Journal of Medical Education*. The 1957 annual report outlines the background of the 1958 institute; it appears in the January 1958 issue of the *Journal of Medical Education*.

both methodologically and in terms of the complexity of the teaching setting. The conflict between education and training functions of the medical curriculum and its implications for society, the many ways and degrees to which services and teaching functions are confounded, the incredible variety and complexity of the financial bases of medical school and hospital operation—all are relatively unique to medicine. As a result, teachers and investigators from disciplines outside of medicine have fewer parallel experiences to share with clinical teachers than they had with basic medical science teachers and student affairs personnel. Circumstances like these presaged the difficulty that would be encountered in delineating clinical teaching institute programs, and thus planning for this series was begun early in the spring of 1957. The first institute in the series takes up general considerations and problems that are common to all of the specialties within clinical medicine. The institute will focus, that is, on the phenomenon of clinical teaching. Succeeding institutes will concentrate upon more specifically defined areas and on the relevant subject matter.

Despite all efforts to reduce the size of successive teaching institute "work-books" (comprised entirely of tabular reports of the pre-institute analysis of questionnaires designed by institute committees with the assistance of the AAMC research staff), they grow larger each year. The accumulated information in these books comprises an impressive documentation of present-day medical education—their value extends far beyond the immediate interests of teaching institute participants. Data from the 1956 and 1957 institutes, for example, are being incorporated into both psychological and sociological research programs within the AAMC and elsewhere.

The necessary time limitations on the initial reports of questionnaire results do not permit thorough analysis of the data prior to the institute for which the data were assembled. Unless, therefore, continued interest in the analysis is maintained after the institute is concluded, much of the real value of the data could easily be lost. As has been indicated, the 1956 and 1957 findings have been incorporated into continuing broad research programs. The materials gathered for this year's First Institute on Clinical Teaching should become basic to the institutes to follow. Consideration might be given during 1958–59 to the desirability of emphasizing preparation of a more thorough statistical analysis and a discussion of the data reported in the 1958 workbook, and to confining the collection of additional data on clinical medical education as much as is possible to the student viewpoint that was not tapped during 1957–58.

It is a pleasure to announce that Dr. Charles G. Child, III, newly-appointed chairman of the department of surgery at the University of Michigan Medical School, has agreed to serve as chairman of the Second Institute on Clinical Teaching in 1959.

Proceedings of the second institute on evaluation of the student (1957), *The Ecology of the Medical Student*, will appear in October. The report of the proceedings of the first institute on evaluation of the student (1956), *The Appraisal of Applicants to Medical Schools*, published in October of 1957, was the first of the institute reports to gain wide attention outside medical groups. Thus, it has received important and favorable reviews in two major publications,[2] minor reviews in several others, and is the first of the reports to have enjoyed sales in non-medical circles. Nearly 6,000 copies of the 1956 report are in circulation. Several communications have been received to the effect that the report was being studied in graduate seminars in psychology and higher education.

The prestige that outcomes like these lend to the teaching institute programs is indeed gratifying, but of greater importance is the evidence that the impact of the institute program reaches beyond the confines of medical education, narrowly conceived. The interests of closer relationships between medicine and the greater university are well served by these events.

The impact that the 1956 institute has had on medical school and committee affairs will be discussed in the following section.

Special recognition for the quality of the 1956 report is due Miss E. Shepley Nourse, editorial coordinator for the research division of the AAMC staff. Her skill in organizing the material; in coordinating the creative efforts, the suggestions, and the demands of some 20 authors and two editors; in the sheer mechanics of editorial management, is conspicuous. Her proficient hand will be no less apparent in the 1957 institute report.

[2] (1) *Journal of Counseling Psychology*, Vol. 5, No. 1, Spring 1958, pp. 79–80 (review by Donald Super), and (2) *Contemporary Psychology*, Vol. 3, No. 8, August 1958, pp. 232–3 (review by Donald W. Fiske).

The Continuing Group on Student Evaluation

One of the significant outcomes of the 1956 and 1957 institutes on the evaluation of the student has been the growth in cooperation that has taken place among medical schools. The institutes gave impetus to recognition of the mutuality of student personnel problems and of the potential value of joint efforts toward their solution. Culminating expressions of the need for mutual assistance have been: (1) the establishment during 1956–57 of the Continuing Group on Student Evaluation under the sponsorship of the then Committee on Educational Research and Services (see pp. 75–84 of the 1957 joint report of the Committee and the Director of Research in the January 1958 issue of the *Journal of Medical Education*) and (2) the organization of regional groups, four of which have held one or more meetings, and at least one of which has already developed a joint research project.

The first national meeting of the Continuing Group was held on October 19–20, 1957, at Atlantic City, New Jersey, immediately preceding the AAMC's annual meeting. The second national meeting was held on October 11–12, 1958, at Philadelphia, Pennsylvania. Publication of the report of the proceedings of the first meeting, entitled *Problems in Medical Student Selection*, was issued on October 2, 1958. The report contains papers delivered at the 1957 meeting by Doctors Woodrow W. Morris, Dora Damrin, and Helen H. Gee, and also a summary describing the general session and group discussions prepared by Dr. John L. Caughey, Jr. Copies of the report were distributed to all deans and to participants at the 1957 and 1958 meetings. Additional copies will be made available at a token charge of $1.00.

During the past summer, established regional groups were invited by Dr. John L. Caughey, Jr., chairman of the Continuing Group on Student Evaluation under the aegis of the Committee on Research and Education, to appoint representatives to a liaison committee that is designed to provide a mechanism linking the regional with the national groups.

On July 26–27 the liaison committee held its first meeting in Cleveland, Ohio. Present were Dr. John L. Caughey, Jr., chairman of the Continuing Group, Dr. Carlyle Jacobsen, chairman of the Committee on Research and Education, and Doctors William Mahoney, Woodrow Morris, and James Schofield. An extensive series of recommendations was developed outlining potential objectives and activities of the Continuing Group on Student Evaluation and suggesting mechanisms for implementing them through the interrelated functions of regional group meetings, an annual national meeting, and ongoing subcommittee activities. These recommendations were scheduled for submission through the Committee on Research and Education to the Executive Council of the Association during the annual meetings in Philadelphia, October 13–15, 1958.

Ability, Personality, and Interest Measurement Research

The development of the Committee's long-range research program on medical student characteristics and their relationship to problems of recruitment, selection, counseling, career-choice, and "success" in the profession has been discussed in detail in each of the last two annual reports.[3] In addition, a complete outline of studies in progress and of the program calendar through 1965 has been prepared and is available on request from Dr. Gee. This report will confine itself to an account of specific activities during the past 12 months.

The 1956–57 freshmen in 28 medical schools, who constitute the longitudinal study sample on which the student characteristics research program is based, this spring completed their second year of medical study. It is time that extensive information about their performances in medical schools be gathered against which the predictive capacities of the tests administered to these students when they were freshmen can be assessed. As the students advance in their careers, the present performance criteria will, in their turn, be subject to investigation with respect to their capacity as predictors. Original plans for the program called for obtaining objective achievement test and interpersonal ratings, as well as rank-in-class data for all students in the sample at this stage in their careers.

In the belief that the National Board of Medical Examiners (NBME) tests would provide a most useful source of information about student achievement in terms of acquisition of factual knowledge, the possibilities of ad-

[3] See the *Journal of Medical Education:* pp. 61–63 and 71–78 of the January 1957 issue and pp. 75–84 of the January 1958 issue.

ministering these tests to the entire sample were explored in a consultation by Dr. Darley and Dr. Gee with National Board officers and staff representatives on January 6, 1958, at Washington, D.C. Dr. Jacobsen and Dr. Gee also met with the executive council of the National Board on February 8, 1958, in Chicago. Following these consultations, plans for general administration of the tests at the present time were abandoned. The National Board's own research has shown that NBME test results may be markedly affected by the nature of the motivating conditions under which the tests are taken. This fact raises a number of serious methodological questions that would need to be explored if the tests were used. The cost of obtaining the test data would be in the neighborhood of $20,000. Since the National Board did not express interest in a cooperative research effort and since the problems attending the use of the test would require extensive consultation with each medical school involved in the study, it was decided to confine study of Part I NBME test data to those students in the sample who took the tests this spring in the normal course of events, i.e., because their medical school required it or because they elected to try for board certification. At the February 8 meeting of the research subsection of the Committee, the director of research was encouraged to design the necessary studies and explore the possibilities of obtaining Part II NBME data on the student sample at the end of their fourth year of study in 1960.

Interpersonal ratings among the students in the sample were obtained this spring. This project was designed during a meeting held on January 31 and February 1. This was attended by Doctors William Schofield, Helen H. Gee, and Charles Schumacher, representing the Committee and AAMC staff; Doctors John Cooper and Ralph Dolkart of Northwestern University, who were invited as advisors on the medical school teacher's viewpoint; Doctors E. Lowell Kelly of the University of Michigan and Ben Willerman of the University of Minnesota, who functioned as expert consultants on interpersonal ratings. Materials developed by Dr. Kelly, Dr. Donald W. Fiske of the University of Chicago, and the late Dr. Wayne L. Whittaker of the University of Michigan Medical School were drawn upon in developing a series of rating scales. The scales were designed to obtain ratings by classmates on a number of characteristics that are thought to be of importance to a future physician, and that fellow students are in a favorable position to observe.

In the early spring, Dr. Gee and Dr. Schumacher held meetings with representatives from each of the schools in the study who were to act as administrators of the program in their schools. The school representatives were instructed as to procedures for administering the rating scales. In addition, the over-all research program was reviewed and summaries of test data on 1955–56 seniors and 1956–57 freshmen were presented to the individual schools.

Dr. William Schofield has accepted primary responsibility for development of materials for another phase of the research program—developing a technique for gathering uniform data on faculty evaluation of student performance in clinical clerkships. A letter of inquiry was sent to all medical deans last spring requesting copies of rating scales, forms, and descriptions of procedures now in use in their schools and within clinical departments to record evaluations of student performance. Forty schools replied to the inquiry in time to be included in an analysis that gives a picture of the relative frequency with which various dimensions and attributes are considered important in appraising clinical performance. A brief article discussing the need for research in this area and describing results of the inquiry is in preparation for submission in the near future to the *Journal of Medical Education*. The analysis of these materials provided a basis for discussion and planning at a conference of selected medical teachers held on August 8 and 9 in Boston, Massachusetts. The conference was aimed at planning the development and content of a faculty rating procedure to be used in the longitudinal study. However, the final scale will also be made generally available to any school that may wish to experiment with them. Participants at the conference included Doctors George P. Berry, Joseph Brozgal, Charles G. Child, III, Oliver Cope, Helen H. Gee, Carlyle F. Jacobsen, George E. Miller, William Schofield, and Charles F. Schumacher.

Copies of tentative scales that have now been developed were made available for criticism and suggestions to participants at the 1958 teaching institute and at the second national meeting of the Continuing Group on Student Evaluation. Final forms of the scales were completed immediately after the annual AAMC meetings and distributed to the medical schools participating in the longitudinal study.

For six weeks during the summer, Dr. Gee was in residence at the University of California at Berkeley where she began preparation of a monograph reporting the first stages of the ability, interest, and personality research program. This monograph will be published as part of a series of studies on various aspects of present-day higher education. It will include description and analysis of intellectual and personal characteristics of medical students as they are related to home and educational backgrounds, regions of residence, characteristics of medical schools, and career choices. Completion of the monograph is scheduled for the coming winter.

A study of the effects of the medical student selection situation on scores on the Edwards Personal Preference Schedule has been completed and is ready to be written up. Several other minor studies of methodological questions are also complete or nearly so. The time pressures created by the progress through school of the students in the longitudinal sample result in some undesirable delays in reporting results of completed studies. Although unforunate, it is also true that brief aging periods are often salutary in that they discourage outbreaks of overinterpretation of data and encourage the development of sober perspective.

Two Ph.D. dissertations based on AAMC research data will soon be on file in the University of Minnesota library and graduate school. These are Charles F. Schumacher's study of methods of keying the Edwards Personal Preference Schedule and Clifton W. Gray's study of the detection of falsification of Strong Vocational Interest Blank scores. Briefer reports of the results of these studies are promised for submission to the *Journal of Medical Education*. A third Ph.D. dissertation is in progress: Eric Klinger, who is a candidate for the doctorate at the University of Chicago, is studying the problem of optimal methods of combining data in prediction studies.

In addition to the collection of faculty ratings of performance in clinical clerkships and the needed consultations with participating schools in the longitudinal research study concerning the National Board Examinations, two additional areas of investigation are urgently in need of attention and action. First in the order of importance is a study of characteristics of the environments of the schools in the study—including curricular patterns, financial structure and control, faculty status, activities and attitudes, teaching facilities, etc. Second is a study of the characteristics of outstanding men in the various medical specialties. A third study is ready for data processing pending the availability of staff and machine time. Most of the students in the fall 1958 entering freshmen classes were given the Edwards Personal Preference Schedule at the time they took the MCAT in 1957. It is now possible to determine the extent to which admissions committees select students in terms of the kinds of variables measured by this test.

It is important that work on each one of these studies be started in the near future. However, there is little likelihood that this will be possible until additional funds permit expansion of the professional research staff. The program to date has been supported primarily by The Commonwealth Fund. Minor sources of funds include the remaining portion of a grant made by the Markle Foundation in 1953 for the study of interest measurement and contributions toward specific expenses made by the Carnegie Foundation through the University of California Center for the Study of Higher Education.

Regular Reports, Research, and Services

A need for improvement in the efficiency of reporting systems for student personnel data as required for regular annual reports and services has long been recognized by the Committee as well as by the office of the director of research. Plans for improvement of these procedures were announced in the 1955–56 Committee report, but relatively little progress has since been recorded. During the past year, however, some progress has been made, although lack of professional staff continues to plague the issue.

In cooperation with the American Medical Association, and under the auspices of the Liaison Committee of the Association of American Medical Colleges and the AMA Council on Medical Education and Hospitals, a complete revision of all annual questionnaires and reporting forms has been undertaken. Dr. Walter Wiggins and Mrs. Anne Tipner of the AMA have met with Doctors Helen Gee and Charles Schumacher of the AAMC several times during the past year to analyze the existing procedures and to outline and implement desirable alterations. The objectives of the program include: (1) reduction of demands made upon the administrative offices of all medical schools by com-

bining into one annually revised form as many as possible of the separate inquiries needed to develop regular reports and special studies sponsored by either the AMA Council on medical Education and Hospitals or the AAMC; (2) increased efficiency of reporting procedures through redesign and elimination of overlap in all report forms; (3) elimination of discrepancies in annual reports issued by the AAMC and the AMA through the expedient of using identical cut-off dates and definitions of terms, and of justifying discrepancies in parallel sources of information. It is planned that revisions in forms and procedures will be fully effected during the coming year. As soon as it has been established that the new forms and procedures fill the needs of the schools that they serve and the agencies responsible for giving service, handbooks for office personnel will be issued to ease the problems encountered in staff turnover, establishment of new schools, and revisions in administrative structures.

In addition to the general program outlined above, a change has been effected in student accomplishment reporting procedures. Formerly, student class standing was reported by the medical schools to the AAMC in thirds of the class, a division that was both intuitively and practically undesirable. Nearly all medical schools utilize and record in detail the results of some method of assessing student performance, and these records are generally amenable to conversion to class ranks, which is the form in which accomplishment is now being recorded in the AAMC office. Information that is lost in an arbitrarily defined grouping system is retained in a rank system and made accessible to research on problems of evaluating student performance. Medicine shares with all higher education a sceptical view of the accuracy of faculty evaluations of performance, but it is well known also that student motivation toward achievement is not easily adjusted to the elimination of assessments. In addition, it is a simple fact that evaluation of selection procedures requires subsequent assessment of performance, and although ultimate performance as a physician is what "counts," accurate intermediate assessments are also needed. Increasing their accuracy—and hence their value—requires intensive study of both existing procedures and newly developed alternative possibilities. To make such studies, data must exist. It is therefore gratifying that nearly all medical schools are cooperating in supplying accomplishment report data to the research office. A few relatively minor problems have developed in the establishment of the new system of recording levels of performance. When complete reports for the 1957–58 school year are available, a study of the problems that have been encountered will be made, and appropriate adjustments arranged.

No changes have been made during the past year in annual reports to medical schools. The two reports that keep medical schools informed of their status in the competition for medical applicants are currently in preparation and should be ready for distribution by the first of November. Other reports issued during the past year include: Undergraduate Origins Reports numbers 6 and 7, September 11 and November 4, 1957, respectively; Applicant Check List, December 10, 1957; Applicant Acceptance Lists, January 24, February 21, March 21, April 18, May 16 and June 13, 1958; Summer Session Bulletin, April 8, 1958; Medical College Admission Test mean scores of applicants to individual medical schools, November 26, 1957, and June 5, 1958. The bibliography of studies on medical student selection and evaluation and the vocational guidance reading list on careers in medicine and the health professions are being maintained. It has been suggested that publication of acceptance lists be started earlier in the applicant year. The suggestion will be considered at the Committee's fall meeting.

The undergraduate college report program has continued unchanged during the past year. Individual reports on the accomplishment of former students who entered medical schools in 1953 were sent to undergraduate colleges on June 3, 1958. A second report, showing the fate of 1956 applicants to medical schools and the first-year accomplishment of those who gained admission, was also issued on June 3. MCAT score distributions are now issued only in alternate years; the next report will be issued in spring 1959 and will cover students tested during the four-year period 1955 through 1958.

Admission Requirements Book

August 1 was publication date for the 1958–59 edition of *Admission Requirements of American Medical Colleges (Including Canada)*. The first sales reports show a growth over last year, notably to colleges and high schools but also to individual students, which lends support

to the advisability of mid-summer publication even though some schools can only supply tentative information by the press deadline. This new edition adds two pages of new information for applicants, based on the questions they ask most frequently in the large volume of correspondence handled by the research office. The American University of Beirut School of Medicine is listed for the first time, and many schools have rewritten parts of their descriptive material to include notes on educational philosophy and special programs. Direct-mail promotion of the *Admission Book* has proved consistently effective, and future plans include expansion of these efforts with some attention to joint marketing with other research office publications in the field of student evaluation, e.g., the 1956 and 1957 institute reports and the 1957 continuing group report.

Special Research and Consulting Services

The number of schools and outside agencies requesting consulting services and data processing assistance from the research office increases each year. In the past 12 months several undergraduate colleges, state medical societies, national medical and research societies, and government commissions have received such assistance, as well as the many medical schools that carry on their own research projects.

One consulting and service project this year merits special mention in that it establishes a desirable precedent for the future development of special-interest research efforts. Fifteen medical schools in the Southern region engaged in a cooperative study of relationships between Medical College Admission Test (MCAT) scores and scholastic problems, e.g., withdrawal for academic failure or failure in major courses. In line with the questions they raised, the research office designed and analyzed the data in a statistical study of the materials the group has assembled. By combining the data from the several schools, it was possible to trace information about trends that would have not been apparent in a study confined to a single school. The study was reported at a meeting of the Southern region schools in August by Dr. Maxwell Little who was in charge of the study for the school group. Continued cooperative research efforts of this kind are to be strongly encouraged.

A recent count (not including the above 15-school group) indicated that, at one time or another during the past three years, at least 39 of the nation's schools have been individually involved in some kind of research-data exchange with the AAMC research office. This is felt to be an excellent record in view of the fact that many schools have no faculty members who are either equipped or free to engage in research on student personnel problems. It is hoped that the Southern regional group example will encourage other related groups of schools to tackle problems of special interest and to enlist the aid of the Committee and the office of the director of research toward their solution.

Cooperative Research Projects

In cooperation with the National Board of Medical Examiners, a study of relationships between MCAT scores, National Board scores, and medical school grades is in progress. Data have been collected and correlation matrices computed. Analysis and write-up of the results have yet to be completed.

A study of the relationships between the Wechsler Adult Intelligence Scale and the MCAT is also in progress. This research was undertaken in cooperation with Dr. Little of Bowman Gray, and is aimed at providing a better understanding of the intellectual dimensions measured by the MCAT. Data on Bowman Gray students are now being analyzed, and the study should be completed early in 1959.

At a meeting on February 8, 1958, in Chicago, the Committee's subgroup on research discussed the desirability of recommending establishment of an AAMC policy stating conditions under which the Committee's sponsorship would be given or cooperative research undertaken with outside research agencies. The importance of confining the scope of the Committee's program to activities that promise definite progress and achievement, and of exercising careful discrimination in utilization of staff time and energy, were emphasized. The development of an explicit statement of policy will be further discussed at the October meetings.

The following proposals were approved at the February 8 meeting: (1) a request from Dr. Thomas R. McConnell, director of the Center for Research in Higher Education, that the office of the director of research cooperate with the Center in a study of the characteristics

of Markle scholars. The study is to be financed by the Markle Foundation grant to the University of California. Details of the study are to be worked out jointly by the staffs of the California Research Center and the office of the director of research at the AAMC. (2) A request from the Johns Hopkins Medical School for the Committee's cooperation in a study of the problem of early identification of ability and capacity for the study of medicine. Since this study is the in earliest stages of conceptualization, only an expression of interest in the project was solicited at this time. Detailed planning of the nature and extent of joint effort and of the design of the study is to be initiated by the Johns Hopkins Medical School.

Medical College Admission Test

Last year a detailed report was given of plans that had been made for development and improvement of the Medical College Admission Test (MCAT). Experimental test items based on the objectives then outlined are being administered this year. Preliminary analyses of the experimental tests will be available in the spring of 1959, and will be reviewed by the Committee's research subgroup.

At a meeting of a subgroup of the Committee in Princeton, New Jersey, on May 25–26, 1958, progress on the test development program was reported and a number of suggestions for procedural revisions in the MCAT program were reviewed. The following procedural changes were approved: (1) establishment of an announced three-week deadline and a firm final deadline two weeks before MCAT test-administration dates; (2) reduction in the number of test centers established by closing centers that fail to attract more than ten candidates, combining centers within 50 miles of each other, and raising to 100 miles (from 75) the limits for establishment of special centers for candidates who live or attend school beyond this distance from a regular center; (3) imposition of a $5.00 penalty for applications received after the three-week deadline; (4) raising to $2.00 the fee for transcripts requested after submission of application to take the test; (5) change in the fall test administration from a week day to Saturday (Sunday administration to be offered only in spring); (6) normative data on region of residence, sex, undergraduate education level, etc. to be compiled only once every three years; and (7) reports of scores via the ETS transcript service to be discontinued four years after a test is taken, after that time reliance to be placed exclusively on score report books.

Subsequent to the May 25 meeting, the Educational Testing Service requested reconsideration of items 3 and 4. Item 3 would complicate billing problems and item 4 would make the MCAT transcript fee different from that for other test services. These items will be reconsidered at the fall meeting.

Also at the May meeting, plans for the handbook for selection committees on use of the MCAT were reviewed. A first draft of the outline agreed upon is approaching completion, and it is hoped that a preliminary form of the handbook will be available for trial by the end of this year.

At its June meeting, the Executive Council authorized an increase in the medical college admission test fee to $15.00. Costs of the test development program, research and of general MCAT program operation have reached a level necessitating this adjustment. The Council also authorized the Committee on Research and Education to approve release of MCAT test scores to scholarship agencies. The Committee will approve release only after thorough investigation of conditions under which agencies propose to utilize test score information. The Committee has agreed that test score information is not to be released to scholarship agencies until after scholarship applicants have been accepted by the medical school they plan to enter.

Report of the Committee on Public Relations and the Director of Public Relations

The AAMC Public Relations Office was established on January 1, 1958, under the leadership of Tom Coleman, formerly Assistant to the Vice Chancellor, Schools of the Health Professions, and Director of Radio, Television and Motion Pictures, the University of Pittsburgh.

At the present time, the Public Relations Division includes public information, public relations, news and advertising for the *Journal of Medical Education*, the Medical Audio-Visual Institute, liaison with many national organizations, and other activities.

Public Information and Public Relations

For the first six months, much of the time of the public relations staff has been spent on two major projects: the development of material to be presented before Congress in support of federal aid for teaching and research facilities; and the development of a basic information file at the Association headquarters. This file will be the first such extensive compilation of data attempted in this office. The information it contains is to be used not only by the Association staff but by the schools themselves and any affiliated organizations seeking information relating to medical education.

In June of this year, the first issue of a newsletter, the Medical Mentor, was published. To be published four times during the school year, this newsletter contains information on the medical schools, AAMC activities, developments in governmental agencies and other groups working in the field of health, as well as any other news of interest to AAMC members. It is intended that the newsletter will serve as a supplement to the news section of the Journal, providing more extensive coverage of certain stories as well as increasing the number of subject areas.

In preparation for Medical Education Week, the public relations staff helped develop promotional material—including news releases, scripts and spot announcements for radio and television, a fact sheet on medical education and speech outlines—for distribution to newspapers, radio and television stations, state and county medical societies, as well as the medical schools.

Working closely with individual reporters, the public relations staff also devoted considerable time during the past several months to the development of major stories on medical education which appeared in the New York Times, U.S. News and World Report, and other publications.

In cooperation with a group of hospital administrators, the public relations staff has organized the new Medical School-Teaching Hospital Section of the Association. The purpose of this Section is the creation of a forum for the study of the role of teaching hospitals in medical education. The initial meeting of the group was held on October 10 and 11 in conjunction with the 1958 AAMC Annual Meeting.

As a result of an intensive individual membership campaign, more than 800 new membership applications have been received as of September 8. A follow-up program currently is under way.

Another important project has been planning the development of materials on careers in medicine and related fields for high school and college students seeking such information. Though this project is in the formative stage, we are hopeful that when completed it will be able to provide each individual school with films and other material on careers in medicine and the biological sciences.

The public relations staff is involved in redesigning and enlarging the 1959 Directory of the Association, which will be ready for publication approximately January 1, 1959.

The staff also has been developing liaison with parts of the American Hospital Association, the American Medical Association, the federal government, national health organizations, the pharmaceutical industry, and other groups.

Journal of Medical Education—Evanston Office

When Dr. John Z. Bowers assumed the editorship, the public relations staff became responsible for advertising, news and other features included each month in the *Journal of Medical Education*.

Advertising: Effective July 1, Mrs. Mary Parrilli was assigned total reponsibility for *Journal* advertising. Most of her time will be spent soliciting advertising, which is the *Journal's* chief source of revenue. Cash receipts from advertising for the period July 1, 1957 to June 31, 1958 total $44,557.78.

News: The public relations staff will continue to be responsible for "Items of Current Interest" and "News from the Schools," together with the Personnel Exchange, the Calendar and any additional materi al needed to complete the total number of pages required for the publication. Also, it is hoped that the staff will provide feature stories from time to time, including full coverage of the Annual Meeting, the Annual Congress on Medical Education and Licensure and other events.

Medical Audio-Visual Institute

Film Library: In the past year, 369 films were shipped on a rental basis, and 132 were sold. The Columbia Broadcasting System paid

$100.00 for the release of four films for use on television. A new catalog for the film library will be issued this Fall.

Film Production: Abbott Laboratories has added $20,000 to an initial grant of $30,000 for the production of films in the *Living Human Cells in Culture* series, produced by Dr. C. M. Pomerat of the Tissue Culture Laboratory, University of Texas Medical Branch, and Dr. I. Costero of Mexico City. Titles of the films completed to date are "The Hela Cell Strain," "Microglia," "Oligodendroglia," "Normal Astrocytes" and "Abnormal Astrocytes." "The Use of Ciliated Respiratory Epithelium in the Study of Local Anaesthetics" is completed except for revision; and "Canine Cerebellum" is almost completed. One additional film, yet to be produced, will complete the series of eight.

Informational Service: The MAVI maintains informational files on films and other audio-visual materials in the field of medical education and relays such information to those requesting it.

MAVI To Serve Pathologists: In April 1958 the Committee on Motion Pictures of the Inter-society Committee for Research Potential in Pathology, Inc., asked the MAVI to act as its central purchasing and distributional agency for the films it approves. It is hoped that this will result in a considerable strengthening of MAVI's function as a medical film library and will extend service to more individuals and groups in the medical schools than heretofore.

MAVI Newsletter: The Newsletter was conceived to replace the Audio-Visual News section in the *Journal of Medical Education.* It contains news items and articles, film reviews and audio-visual news from the medical schools. Its aim is to promote better utilization of audio-visual materials through the exchange of information regarding activities in film production and utilization, television, radio and the preparation, availability and use of other audio-visual materials. In the near future this will become a section of the association newsletter "Medical Mentor."

John D. Van Nuys, *Chairman*

Report of the Committee on Medical Audio Visual Education

Since the appointment of this Committee, Edwin Foster has resigned as director of the Medical Audio Visual Institute, and Mr. Tom Coleman, director of Public Relations for the Association, has been given responsibility for the Institute at the Association headquarters.

The Committee on Medical Audio Visual Education has held two meetings during 1958. The first was held prior to the Congress on Medical Education and Licensure in February, and the second was held in Philadelphia on October 12.

As a result of these meetings, the Committee would like to recommend the following:

1. That the activities of the Medical Audio Visual Institute, as they have developed through the years, should be continued.
2. That there be a modest enlargement of the present Committee membership.
3. In addition, it is the opinion of the Committee that it is desirable to make a careful scientific evaluation of the effectiveness of audio-visual aids. The Committee therefore recommends that there be an attempt to devise a scientifically designed evaluation program, for trial in selected institutions, to determine the real value or usefulness of these techniques in medical education.
4. We further recommend that, if such an evaluation be implemented, financial support for the experiment should be sought from appropriate organizations.
5. Since there apparently are areas of activity which overlap the function of his Committee and the Committee on Continuing Education, we suggest the advisability of liaison between the two Committees.
6. In evaluating the financial structure of the film rental library of the Medical Audio Visual Institute, your Committee feels that the rental charges of this service do not provide adequately for the service, maintenance and replacement of materials. The Committee therefore suggests that the service charges be re-evaluated in the light of actual costs. Although there are many facets to the economic structure which are best known to the Executive Council, we think that a rental fee in the neighborhood of approximately $5.00 would be more suitable.

Frank M. Woolsey, Jr., *Chairman*

Report of the Editor

During the past year there has been a major reorganization of the operation of the *Journal of Medical Education.*

The University of Chicago Press assumed responsibility for printing and publishing the Journal, commencing with the July issue. The Editorial offices are located at the University Hospitals, Madison, Wisconsin, and the News Office at 2530 Ridge Avenue, Evanston, Illinois. It will require several months for all aspects of this changing responsibility to be worked out.

An attempt is being made, in general, to maintain a high standard of quality of content and to increase the size of the *Journal* if necessary. We will include all worthy articles and give adequate coverage to all aspects of medical education at home and abroad. We have increased the number of manuscripts being published, and after approval by the Editorial Board, publication requires only a maximum interval of three months. We are averaging about six published manuscripts a month and are maintaining no appreciable backlog. It appears that for a considerable period we must continue to solicit manuscripts. We hope that the members of the AAMC will bear in mind our desire for manuscripts.

Under the leadership of Mrs. E. B. Pohle, our Assistant Editor, we have established this section to include addresses and communications as well as editorials. Significant addresses should be transmitted for this section and we hope that you will use it for the expression of your opinions on the problems of medical education—pro or con.

This year we have preprinted abstracts of papers submitted to the Program Committee for the Annual Meeting. The details of this program need some smoothing out.

On January 1, 1959, we plan to initiate a new section in which we will abstract significant articles on medical education from the world's literature. There is a growing world-wide interest in medical education, and important developments are occurring in many other countries. To our knowledge, this will be the first effort to pull together in one place developments on medical education from across the world.

Under the direction of Professor W. F. Norwood, the second series of articles has been initiated. This series describes eminent individuals in the history of United States medical education. A third series has been discussed by the Editorial Board.

Developments in this field are printed as received in the section entitled "Items of Current Interest." With the termination of the separate section on Audio-Visual News, there was some apprehension that AAMC and the *Journal* were no longer interested in Audio-Visual developments. This is clearly not the case and we welcome such material.

A report of the first conference for Foreign Scholars in the Medical Sciences was established in March, 1958. The report of the second conference will be published in a few months.

The circulation of the *Journal* is around 6000 copies per issue.

A few weeks ago, several of us were fortunate enough to be invited to participate in the first conference of the Association for the Study of Medical Education of Great Britain. Held in London, this conference was sponsored by the Royal College of Physicians. The Association includes every medical school in the United Kingdom and Northern Ireland, and it is founded with specific dedication to the development, study and research in medical education.

The conference had some excellent discussions and papers, and during our visit, Dr. Hale Ham, one of the members of the Editorial Board, and I made arrangements with the Association for the Study of Medical Education for the *Journal of Medical Education* to publish material and articles emanating from that group.

Further, we expect to make the Secretary of this Association, Dr. John Ellis, a relative of the editorial board, and we feel that this can be a distinct step forward in what one might call internationalizing the *Journal of Medical Education.* Remember that it is the only journal in the world which is devoted to problems of medical education.

John Z. Bowers, *Chairman*

Supplemental Report of the Editorial Board

At the Editorial Board meeting on October 12, Mr. Carroll Bowen described the status of the publications and printing services of the University of Chicago Press, reviewed the negotiations which preceded and culminated in the

assuming by the Press of the publication and printing of the *Journal of Medical Education*, summarized current *Journal* operations, especially circulation (5,500, foreign approx. 430, print run, ca. 6,000), and analyzed potential promotional possibilities.

The general and specific format of the *Journal* was discussed. It was agreed that the cover was satisfactory but that the new seal should be used, and that an internal, more complete page of contents would be desirable. While someone suggested that the September issue, containing the Program of the Annual Meeting should so specifically state—e.g., on the spine, it was later recommended that the program per se should not even be included among the arabic-numbered pages, nor, in addition, any informal report of the meeting. Dr. Lippard suggested that these be included, if at all, in an abbreviated form under roman numerals.

The board agreed that an annual index and either a 5- or a 10-year index should be undertaken, and it was discussed whether book reviews, Forum articles, and abstracts should be listed.

The desirability of publishing abstracts in advance of the meetings was discussed, with no final agreement or decision. Mr. Coleman felt that the procedure was undesirable from the viewpoint of public relations, although others emphasized that many other societies did successfully publish abstracts in advance of the annual meetings. It was also suggested that the abstracts could be printed separately and mailed to subscribers. Dr. Bowers recommended that more papers be presented at the meetings rather than merely being "read by title." It was agreed that the complete papers of the abstracts and also those presented at the meetings be subject to the same review as any manuscript submitted to the editorial office.

The long-range program for soliciting articles drew considerable discussion. Dr. Bradley pointed out how successful the historical article series was, under the leadership of Dr. Norwood, and suggested that other broad topics be made the responsibility of certain individuals for solicitation. Numerous subjects suitable for a series of articles were recommended, including medical education in Russia, medical school architecture, the running of laboratories for students, animal quarters, medical libraries (design, organization, microcarding, etc.), the synthesis of scientific information, the examination system at home and abroad, 2-year medical schools, postgraduate education, teaching hospitals from the point of view of their administrators, etc.

The desirability of having a reporter write for the *Journal*—on developments in medical schools and on meetings, both at home and overseas, was emphasized. It was mentioned that *The Lancet* employed numerous anonymous writers, and members of the board agreed that they would be more willing to write up such accounts and analyses if anonymity could be maintained. Dr. Ham suggested that, for the world meeting, the program be considered in advance and such papers solicited; and also that the *Journal* should make more effective use of foreign correspondents.

Dr. Bowers requested an opinion of the effectiveness of sending out a questionnaire, and it was agreed that this procedure would be more useful at a later time, since the improvements effected in the *Journal* were so recent that not sufficient time had elapsed for an adequate evaluation by most readers.

Drs. Bowers and Ham reported on the history and status of the relationship of the Association and the *Journal* with The Association for the Study of Medical Education (ASME) in England, including the fact that they had, when in London, offered the use of the *Journal* for ASME's publication program. Ways and means of insuring that this proposal be realized were discussed. It was suggested that a representative from ASME (i.e., Dr. Ellis) be invited to become a member of the editorial board, that they be asked for specific constructive suggestions concerning the relationship, and that, if possible, the masthead be revised to state that the *Journal* was also the official publication of ASME (with the concomitant removal of the notation from the cover of the sole affiliation of the AAMC). Enthusiasm for other potential international affiliations was expressed, along with some feeling of caution concerning procedures involving other countries. In this regard, it was mentioned that the Canadian Medical Association might be added to the masthead as well.

The forthcoming new abstract section of the *Journal* was discussed, and Dr. Peterson's suggestion for a title—"Abstracts from the World of Medical Education" was adopted.

In considering the Forum, the board advised that addresses should be subject to review by the Editorial Board.

Dr. Norwood reported on the three series

of historical articles, and was commended for his success with these papers. It was suggested that two of the series might profitably be published in book form.

Mrs. Parrilli reviewed the advertising program, reporting a general rise in advertising. It was agreed that all the right-hand pages of the news section could be offered for ads—and that, in effect, *only* the roman-numbered pages were to be so used for *any* advertising.

The Personnel Exchange section was discussed, and once again the board arrived at no final decision whether the personnel available section should be omitted or the service billed.

As a final topic for discussion the board considered its own demise, and agreed that a formal rotation system should be set up, effective January 1, 1960. With enlargement of the board to a total of eight, a 4-year period of service was agreed on, with two on-coming and two out-going members per year.

John Z. Bowers, *Chairman*

Report of the Committee on Continuation Education

A meeting of the Committee was held in Chicago, February 10, 1958, for the purpose of exploring fields of interest for consideration at future meetings. The following subjects were discussed:

A suitable technique for evaluating the effectiveness of postgraduate medical education has been a long-felt need. Although specific approaches have not been forthcoming, the Committee will continue to consider the problem and will welcome suggestions.

The increasing participation of pharmaceutical firms and other commercial organizations in postgraduate medical education was discussed. It was the consensus that participation of these agencies should properly be limited to financial support and should not include a voice in the programming or content of a course. It was deemed appropriate for an acknowledgement of the support to be made in a program note. Commercial types of exhibits or other suggestions of commercial interests should be avoided.

The problem of providing opportunities in postgraduate education for osteopathic physicians was considered as a subject for further discussion. It is recognized that significant segments of the population living in small communities receive their medical care from osteopaths, particularly in the area of general practice. Inasmuch as osteopathic physicians are now providing conventional medical care in addition to osteopathic technique, do we have responsibilities to provide opportunities for them to attend postgraduate courses in order to improve their level of practice?

Several recent developments in postgraduate medical education were discussed. A new technique developed at the College of Medical Evangelists was demonstrated and discussed by Dr. Norwood and Mr. Walter Crawford. Tape recordings of lectures and courses of lectures illustrated by accompanying film strips will be produced and distributed by Encyclopaedia Britannica Films.

Note was taken of the *ad hoc* committee on postgraduate medical education which has been working for some time under the auspices of the Council on Medical Education and Hospitals of the American Medical Association. It was recommended that Dr. de la Chappelle, a member of that committee, serve as liaison member between that committee and this one.

Note was taken of the World Congress on Medical Education to be held in Chicago in September of 1959 with major emphasis on postgraduate medical education.

At a meeting of the Executive Council on May 24th, the Committee on Continuation Education was asked to consider what the Association might do in the interests of improving educational opportunities for the practicing general practitioner.

C. Wesley Eisele, M.D., *Chairman*

Report of the Committee on Financing Medical Education

A dinner meeting of the Committee was held at the Palmer House on the evening of February 8, 1958, at the time of the Annual Congress on Medical Education and Licensure.

It opened with an orientation by Dr. Darley, who explained briefly the reorganization of the AAMC headquarters office and the part that the Evanston staff would play in the fields of interest appropriate to this Committee. He pointed out that many of the duties formerly performed by the Chairman of the Committee (Dr. Hinsey) would be performed by the Ex-

ecutive Director in conjunction with a liaison office in Washington. This Washington office will be opened by Colonel Luke Quinn who has already been thoroughly oriented relative to the importance of his operations in the Capital.

Federal Aid: Considerable discussion centered about the possibility of congressional action on the controversial issue of Federal aid for the construction of medical education facilities. It was recalled that a questionnaire recently went to the deans of all the medical schools asking for estimates on school construction needs. At the time of this meeting some 30 have responded and shortly the Executive Director will prepare tables of the pertinent data for use at Congressional hearings.

The pros and cons of attempting to amend the legislation pertaining to matching Federal funds for medical research facilities to include matching funds for purely education facilities were discussed. Obviously, the final decision will be in the hands of people like Senator Hill and Congressman Fogarty and their recommendations will of necessity evolve from the hearings and the climate in Washington.

There was complete concurrence by the Committee that every attempt be made to cause the hearings to begin at the earliest possible date and witnesses to include, among others, one or more medical school deans and a university president (the Presidents of Stanford University and the University of Kentucky were suggested as appropriate possibilities.)

Indirect Cost: At the suggestion of the headquarters of the AAMC a number of medical schools have done thorough studies in the development of data designed to reflect the indirect cost of medical research carried out at their particular institutions. In those medical schools which are in university setting, the universities collaborated with the medical school deans at the request of the American Council on Education. These data would tend to show that there is a wide variation between schools in the "indirect cost" ranging from an average somewhere between 30 and 35% to a high of approximately 45%. No school reported an indirect cost as low as that currently included in the USPHS grants—namely, 15%.

Currently, this matter has been studied during the past year by the Killian-du Bridge Committee and the Bureau of the Budget. It is assumed that this Committee's findings will be similar to that just described and that their testimony to the appropriate Congressional Committees can be of great assistance in having either (a) the 15% for indirect cost raised to 25% or (b) such verbiage inserted in the appropriate legislation will allow "full payment for indirect cost." Under solution (a) a formula would be decided for each school which could well point up the variations already observed from the studies made to date. All in all, the climate would appear favorable to some relief in this particular field during the current session of Congress.

AAMC-NFME Relationship: It was pointed out that representatives of the NFME have arranged a conference during the current Congress at which time representatives of that organization will discuss the Fund with the appropriate committee of the AAMC (Drs. Moore, Hinsey and Youmans) together with the Executive Director of the AAMC and key members of the Committee on Financing Medical Education.

Voluntary Health Groups: A brief report was made relative to the discussions which are currently in progress wherein there looms the possibility that such voluntary organizations as the National Polio Foundation, American Cancer Society, etc. might allocate 5% of their income toward medical education. Dr. Hinsey and others are active in these discussions and future developments will be reported upon from time to time.

The meeting was adjourned at 8:00 p.m. in order that the Committee members could attend the official meeting of the AAMC being held immediately thereafter.

Other Developments: A great many individuals, particularly Dr. Darley and Dr. Coggeshall, have been extremely active in appearing at Congressional hearings pertaining to those subjects discussed at the meeting in Chicago. At the time of the preparation of this report, all signs pointed toward some relief in the field of indirect cost of medical research but the question of federal aid to medical educational facilities are still problematical.

George E. Armstrong, *Chairman*

Supplemental Report of the Committee on Financing Medical Education

At a meeting of the Committee held October 12, notice was again taken of the untimely death of Stockton Kimball, Buffalo, a former member of the Committee. Attention was called

to the communication from Norman Topping, formerly Vice President for Medical Affairs of the University of Pennsylvania, now President of the University of Southern California, also a member of the Committee, in which communication Dr. Topping states that he feels he should resign from the Committee since he will no longer be able to give the time necessary to such committee membership. He suggests that this be brought to the attention of the Executive Director and the new President of the AAMC for their guidance.

Legislative Matters: A) After considerable discussion of the efforts made during the last session of Congress to amend the Health Research Facilities Act or to promulgate a separate bill to aid in the construction of medical educational facilities, and which efforts were not pushed to the limit because of the possibility of jeopardizing the extension of the Research Facilities Program, it was decided to recommend to the Executive Council that the Association strongly support in the next session of Congress the enactment of legislation for Federal assistance in the construction of medical educational facilities.

B) In the matter of payment by Federal agencies, and more specifically by the various units of the Department of Health, Education and Welfare, it was pointed out that pertinent events have transpired since the last meeting of the Committee. The efforts of the Association and the Department of HEW to have Congress raise the allowable percentage for indirect costs involved in research grants to educational institutions from 15% to 25%, a position supported by the appropriate committee of the Senate, failed in the Senate-House conference—probably due to the fact that the Bureau of the Budget had not yet had the opportunity to analyze the report of the Killian-du Bridge Committee. On September 10, 1958, after analyzing this report, the Bureau of the Budget issued Circular No. A-21, to the Heads of Executive Departments and Establishments, Subject: Principles for costing research and development under grants and contracts with educational institutions. The principles enunciated for determining the direct and indirect costs under varying circumstances and for different institutions appear to be clear and sound. This should set a pattern for relief from the 15% ceiling currently imposed by law in the case of the USPH grants. The Committee recommends that the Association follow closely the discussions of the appropriate congressional committees regarding this matter.

C) Attention was called to the recently extended Hill-Burton Program and the failure of the basic law, or so far as is known to the Administrative Regulations promulgated for the implementation of the Program to take cognizance of the importance of those hospitals operated primarily for teaching purposes, particularly those involved in the clinical instruction of undergraduate medical students. This group currently has an extremely low priority although they represent the source of the personnel needed to man the installations constructed, primarily in rural areas, under the Hill-Burton Program. The Committee recommends that the Association explore and vigorously pursue this matter as a vital facet of the financial needs of medical education.

Multiplicity of Cost Studies: The number of studies currently being promulgated by various agencies, some with governmental support, in the general field of the cost of medical education was noted with concern. The work-load placed on deans, the format and specific questions posed by some questionnaires, it was felt will lead to the accumulation of much misinformation and the ultimate production of statistical data which will be false and confusing and may lead to complete chaos. The Committee notes with satisfaction that the Executive Council has already discussed this very important subject and will recommend action to the membership of the Association.

Future of the Committee: Again it was pointed out that with the strengthening of the Central Headquarters of the Association this Committee is no longer an operating one. After prolonged discussion the Committee feels that it should be retained, that its membership remain fairly large (at least with a minimum of eight as currently constituted) and that it be given mandates from time to time by the Executive Council to assist in developing recommendations and encouraged to initiate recommendations regarding Association policies in fields appropriate to it. Also that the Executive Director continue to call on the Chairman and the various members of the Committee for advice where appropriate and for concrete assistance in presenting the Association's views to Congressional Committees and other agencies as the need therefor may arise.

George E. Armstrong, *Chairman*

Report of the Committee on International Relations

We do not have any specific matter to draw to the attention of the Association. However I do wish to take a moment to tell you something of the plans for the second World Conference on Medical Education to be held in Chicago, August 19 to September 5, 1959.

Dr. Raymond Allen, Chancellor of the University of California in Los Angeles, is the president of this Conference. There are a number of deputy presidents and vice-presidents drawn from all of the nations of the world.

The general topic is "Education Beyond the Point of Graduation from Medical School." In other words, it covers the internship, residency and continuation in education of all types. All of the speakers are invited speakers, have been asked to speak because of some situation in their country, in their system of medical education or medical practice, which makes them peculiarly qualified to bring this information to all of the other nations of the world.

I sincerely hope that all of the medical schools in the United States will be well represented at this meeting.

Robert A. Moore, *Chairman*

Report of the Committee on Internships, Residencies and Graduate Medical Education

During the past year the Committee has been concerned largely with final plans for the study of internships in university teaching hospitals which the Association is conducting.

It is recalled that the Executive Council approved the plans for the internship study following the last annual meeting. A proposal was presented to the Kellogg Foundation in December, 1957, and was approved in April, 1958, for the sum of $75,000 to be expended during eighteen months beginning June 1, 1958. Our committee has met twice in the first six months of this year, in February during the Congress on Medical Education and on June 13 in Chicago. These meetings were concerned with the plans for the study and selection of a Director of the study. It is hoped that the name of the Director can be announced prior to the annual meeting of the Association.

In June of this year the Association received a copy of the preliminary report of the Committee on Preparation for General Practice which has been working under the sponsorship of the American Medical Association. This report was referred to our committee for consideration. Since this is a matter of interest to the Association of American Medical Colleges it was deemed appropriate for our committee to consider this carefully and report to the Association at the Annual Meeting. A subcommittee was appointed consisting of the following: George Aagard (Chairman), Robert J. McKay (Pediatrics), Carl Moyer (Surgery), Milton Rosenbaum (Psychiatry), Lyman Stowe (Obstetrics and Gynecology). This ad hoc committee will report prior to the Annual Meeting. Also, those members of this subcommittee who have not been members of the parent committee have been asked to join this parent group to provide wider representation of the various specialties in the course of the study of the internship and continuing activities of the committee.

The committee has noted with interest that a number of different agencies are planning studies of the internship. The committee has met with representatives of the Bureau of Applied Social Research of Columbia University which is undertaking a study of the internship under the sponsorship of the Commonwealth Fund. Certain phases of this study will be of interest to our study group and close liaison will be maintained.

During the year further evidence from many sources of the unrest in graduate medical education has indicated the timeliness of the study of the internship which the Association is conducting.

The Committee submitted the following progress report of the Committee on Preparation for General Practice. This is a committee of the American Medical Association upon which the American Academy of General Practice and the Association of American Medical Colleges have been invited to participate.

Progress Report

At the meeting of the House of Delegates of the American Medical Association in Seattle, November 27–30, 1956, the Committee on Medical Practice presented a report containing five instructions. The report was considered by the Reference Committee on Insurance and Medical Service and on its recommendation was adopted by the House. The report, in its instructions 3 and 4, recommended that a study group be formed to consider the best background preparation for general practice.

The Executive Committee of the Board of Trustees, at its meeting on December 14, 1956, voted that the Council on Medical Education and Hospitals address itself to instructions 3 and 4 and requested the Council to form a study group of representatives of the Council, the Association of American Medical Colleges, the American Academy of General Practice, and representatives of the specialty areas, and proceed "to analyze objectively and make recommendations as to the best *background* preparation today for general practice."

Subsequently, the Committee received a related assignment from the House of Delegates during the New York meeting, June 3–7, 1957. At the time that the Reference Committee on Medical Education and Hospitals considered the reports of the Klump Committee on General Practice Prior to Specialization, it recommended discharge of that Committee and also "that the newly organized committee to study the best background preparation for general practice, in its long-term cooperative study with appropriate groups, give full consideration to the importance of a broad background of training and experience for all physicians in the care of the patient as a whole and of the family as a unit."

The first meeting of the Committee on Preparation for General Practice occurred January 18, 1957. There have subsequently been meetings as follows: Subcommittees—May 9, June 28–29 and October 20, 1957. Committee Meetings—May 10, September 14 and December 5, 1957, and February 22–23 and May 17, 1958. *It appears appropriate and desirable to report at the present time the current thinking of the Committee.*

General Considerations

The Committee undertook its assignment in full recognition of the need for a long range objective study regarding what educational background would best prepare future physicians for general practice. This immediately raised questions about the future nature of such practice in the light of the needs of the people as well as the changing dimensions of medical knowledge.

After careful thought and study of pertinent data, the Committee has concluded that the marked trend toward what is called full time specialty practice will be of continuing significance. As knowledge important to medicine continues to increase, the further development of specialism and its related tools and techniques will also take place. Although the availability of such specialty service is essential to good medical care, it is believed that it is similarly important that the broad, general outlook in medicine also be retained.

The Committee is of the opinion that the needs of the public are well served through comprehensive medical care. By its very nature, such care is based necessarily upon a close interpersonal relationship that most readily develops through long association between a phyician and a patient. To have greatest significance, this close relationship also involves the physician with his patient's environment, and most particularly with his family.

There is a general awareness of the changing nature of society. It is proper and necessary that the pattern of medical care adapt itself to fulfill best its role in this changing order. An unknown degree of such adaptation, not measurable in available data, has already taken place. For instance, many internists do not restrict their professional activities to consultation and referral practice as is connoted in the terms "full time specialty" or "limited specialty." Rather, they engage in a form of family practice largely restricted by the age of their patients.

It is recognized that the approach to medical practice with the humanistic concept of and concern for the "whole patient" is and indeed should be characteristic of all physicians whether specialists or not. However, the concept of comprehensive medical care, as used here, implies the active performance of direct service over broad areas of medicine and the availability of this broad service for all patients.

The Committee believes that further changes in the pattern of medical practice and of graduate study for practice will be required to meet successfully the challenges of comprehensive

medical care in the future. It does not seem likely that the general practitioner or the internist as commonly conceived today will be ideally prepared to fulfill this role in the future. Either the general practitioner should have a more extensive graduate medical education or the training of the internist should be broadened in preparation for the assumption of comprehensive and continuing responsibility for the health of the individual or his family irrespective of age.

In considering the preparation for this type of medical practice in the future, the Committee devoted much thought to the title that should be used for such a physician and such a medical practice. Although many alternatives were considered, none were thought to be more clearly descriptive than general practitioner and general practice.

For its working definition of the medical practice involved, the Committee adopted the following: "General Practice is that aspect of medical care performed by the Doctor of Medicine who assumes comprehensive and continuing responsibility, commensurate with his professional competence, for the patient or his family."

The educational program proposed for future general practitioners is intended to prepare them to actively and directly provide services to patients irrespective of age over broad areas of medicine and to coordinate specialty consultation and care according to the peculiar needs which their patient's problems may require. *The Committee believes that there will be an increasing need for the general practitioner who is prepared to provide these kinds of services.*

The Committee has given attention to the trend toward group practice. This trend, in itself, serves to emphasize the need for physicians adequately prepared to serve as general practitioners and for inclusion in such groups.

The Committee believes it to be in the best interests of medical practice, the public and the profession itself, that every physician should be free to follow that field of medicine which most appeals to him and for which he is most suited by ability and temperament. He should be trained adquately for that field which he elects to follow. The student contemplating his future career in general practice should have available to him recognized educational programs of high quality comparable to those existing in specialty areas.

Before addressing itself to the new graduate program, the Committee wishes to express certain viewpoints in regard to the medical school experience that is a necessary prelude to any graduate program. Regardless of what his future career may be, and this is not usually determined with finality early in his studies, the physician must have a sound balanced education in the sciences basic to medicine and in their clinical applications. There is a common fund of knowledge and skills desirable for all graduates of medical schools. The provision of this common fund of knowledge and skills is the major objective of medical schools.

The educational program in a modern medical school necessarily exposes the student to specialty viewpoints. To maintain the objective of providing a sound, balanced medical education, it would seem highly desirable that the student be exposed also to the concept of family practice. Because ambulatory care is an important part of medical practice, medical schools should be encouraged to develop that phase of medical education centered around the ambulatory patient, his continuing care, his environment, and the use of community resources, to the fullest extent compatible with the total educational program.

The Committee is cognizant of the many studies being conducted for the improvement of the medical school curriculum, and of the several experimental approaches being applied. These efforts are commended. The Committee believes that the entire medical curriculum warrants constant reappraisal and study for the purpose of developing educational programs which will better prepare the graduate to gain maximum advantage from the greater clinical opportunities of his graduate training. We, in medicine, have been fortunate in having medical school faculties who have subjected the educational objectives, method and content to a continuing intelligent, and critical appraisal. Careful, intensive study has frequently led to well planned changes. The Committee believes that the means of accomplishing further changes in undergraduate medical education should be left to the administrators and faculties of the schools, in whose ability and integrity the Committee has highly justifiable confidence.

The remarkable advances in medicine that have occurred and that will continue to occur have increased the difficulty and the complexity of general practice as well as of other specialty practices. The responsibility of the general practitioner is a heavy one. It demands knowledge, alertness, agility of mind, and a wisdom born of education and experience. It necessitates the possession of a sound knowledge of the funda-

mentals of medicine as well as a synoptic knowledge of the basic principles of special fields. In view of this, as well as the pattern that has been followed successfully in the specialty field of developing graduate educational programs beyond medical school, *the Committee recommends that a new graduate educational program for general practice be developed.*

The Proposed Program

In recommending a new graduate program for the general practice of medicine, the Committee believes that primary consideration should be given to an educational experience enabling the physician to provide medical care for all members of the family irrespective of age. After determining that the period beginning at the time of receiving the M.D. degree is the most appropriate one for a new plan of preparation for general practice, the Committee agreed to concern itself with a minimal program. It was considered best at the outset to avoid being compromised by programs presently in existence or by current limitations imposed by statutes or military obligations. This proposed program is designed to replace for future general practioners, the current internship as well as existing residency programs in general practice.

The internship year as presently constituted cannot be considered as a component of this program for it would result in dividing it into two separate segments. The internship was designed many years ago to provide the initial contact with and responsibility for patients. Since the development of the clinical clerkship, it no longer comprises such initial patient contact but rather it is now considered as one of several graded steps toward the assumption of total responsibility for patient care. Further, there is now general agreement that the one-year internship also is inadequate as preparation for the practice of medicine. The Committee believes the one-year internship encourages inadequate preparation for general practice.

The present values of the internship will be an inherent part of the proposed program, but cannot be separated out of it as a segment without weakening the greater values to be derived from dealing with the new program as a unified whole. The graduate program proposed as preparation for general practice is designed to be more comprehensive than the internship in regard to patient responsibility, educational content, and continuity of experience.

Under the existing circumstances, it is believed that a period of at least two years of formal hospital training following attainment of the medical degree is necessary in preparation for the general practice of medicine. However, time alone cannot serve as a valid measure of educational adequacy. *The two year period would be minimal even where the other factors of educational quality and content are optimal.*

The graduate program of two years in preparation for general practice should be planned and implemented as a unified whole. Since the general practitioner is to provide continuing care, it is highly important that the preparation for this kind of practice be designed to assure every possible opportunity for the participant to study patients over relatively long periods of time. He should follow the patient, as necessary, in the outpatient service, when indicated in the home, and certainly from one hospital service to another. There should be a maximum continuity of assignment to specific services so that the program will stress education through continuing rather than episodic medical experience. Such a unified two year program will permit and encourage the necessary progression of responsibility and content.

This two year program should include a basic eighteen month period to provide experience in the diagnostic, therapeutic, psychiatric, preventive and rehabilitative aspects of internal medicine and pediatrics in a very broad sense. In addition to the basic period, the opportunity for training in obstetrics should be a requisite for all programs. Participants who plan to practice obstetrics are encouraged to spend the major portion of this elective six months in obstetrical training. For those who do not anticipate an obstetrical practice, the six month elective should be utilized for further training in other segments of the program. It is urged that the concept of unity be applied to the elective period to prevent unduly short assignments that would provide little educational justification.

Throughout the two-year program, the trainee should have experience provided by regularly assigned periods of emergency room service. The Committee believes that this should include training in the emergency and primary management of trauma and in minor surgery. (The working definition of the latter is that minor surgical procedures are those which in themselves have no expected mortality, require no medical assistants and, in suitable circumstances, may be performed satisfactorily outside the hospital.)

Because the care of the ambulatory patient is

an important part of medical practice, provision of adequate opportunities for the study of outpatients is essential. This should constitute a part of the basic eighteen month period and may well continue through the other six months. It should include experience in medical or diagnostic gynecology.

Experience in the care of the new-born infant is considered an essential portion of the program.

The proposed two-year program should assure the opportunity for adequate preparation of the physician to provide medical care to all members of the family. *Any physician planning to undertake obstetrics other than uncomplicated obstetrics, or surgery other than minor surgery, should have additional adequate training.*

The Committee believes that such a two-year experience would furnish a sound base for further graduate medical education in any field. The Committee therefore recognizes that the thoughtful cooperation of specialty groups will be required to implement a sound program for preparation for the general practice of medicine.

This report outlines the minimal program under optimal circumstances. There will be those physicians who will elect further graduate education and such should be encouraged.

Finally, the general practitioner, like all other physicians, will be expected to pursue a continuing program of postgraduate medical education.

The Committee envisages certain further studies as required for the completion of its assignments. In view of the thoughtful cooperation of specialty groups needed for successful implementation of the proposed program, the Committee is holding formal consultations with such specialty groups as an essential preliminary to the more specific and detailed planning of the proposed minimal program. It expects to include consideration as to whether this program of preparation for general practice should be called an internship, or a residency, or identified in some other manner. The Committee, in cooperation with the specialty groups involved, will give consideration to the type of recognition that may be developed for those individuals who successfully complete a part or all of this proposed program.

Respectfully submitted,

AMA Committee on Preparation for General Practice

H. G. Weiskotten, *Chairman*
Edward L. Turner, *Secretary*
John S. De Tar
James M. Faulkner
Rudolph H. Kampmeier
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Leland S. McKittrick
Henry B. Mulholland
Jesse Rising
W. Clarke Wescoe
John Youmans
Ex-officio
Ward Darley
Charles Nyberg
Glen Shepherd
Walter Wiggins

The following statement was approved as the Association's policy in relationship to the Progress Report of the Committee on Preparation for General Practice:

"The Association of American Medical Colleges notes with interest the Progress Report of the Committee on Preparation for General Practice.

"The Association favors the proposition as stated in the report that there will be a continuing and growing need for physicians with training upon the attainment of the medical degree in 'that aspect of medical care performed by the Doctor of Medicine who assumes comprehensive and continuing responsibility, commensurate with his professional competence, for the patient or his family'.

"The Association also favors the proposition that residencies offering this training might supersede and go well beyond the intern year and also that they should be designed and implemented as a unified whole.

"The Association submits that the concept as expressed in the report will best be served if the training program will place major emphasis upon internal medicine, pediatrics, psychiatry and preventive medicine.

"And finally the Association recommends that as the Committee on Preparation for General Practice continues with its assignment, it develops educational standards that will give these residencies a status that is comparable to that enjoyed by other areas of specialty education."

Next, the Committee expressed concern over the chaos that exists in our residency appoint-

ment system. The following statement was presented for consideration with the decision that the statement should be referred to the deans, faculties and hospital staffs concerned. Comments are to be invited and when received are to be referred for the further consideration of the Committee.

"Many factors contribute to the current disorderly process in the appointment of residents to the staffs of our teaching hospitals. The situation in residency appointments today is comparable to that of intern appointments prior to the development of an effective matching plan. Each year, the situation becomes more chaotic. For example, this year, many of our services found themselves forced to select residents for the following year after only one or two months for observation of intern performance. This is unfair to both the hospital services and applicants.

"It does not appear feasible at this time to develop a plan for residence appointments comparable to the intern matching plan. However, it is the opinion of your Committee that the situation would be improved if simple traffic rules were adopted by our teaching hospital services.

"Therefore, it is recommended that the Association encourage its constituent medical college teaching hospital services to participate in a voluntary plan to delay the offer of residency appointments until January 1, or not more than six months prior to the effective date of the appointment, in the calendar year in which residency appointments will be effective. It is recommended that this plan be effective with the selection of residents for appointment in July of 1960.

"An adequately supervised clinical experience following graduation from medical school—the internship—has become an integral part of the professional development of the physician.

"During the past few years, many different suggestions and recommendations have been made concerning the internship, all pointing to the conflicts between the original concept of the internship as an educational experience, and a growing demand for interns to meet service needs.

"In the interest of providing more intern service, some have urged the abolition of the internship in all medical school hospitals, the place of interns to be taken by medical students as part of the clinical clerkship.

"The Association of American Medical Colleges affirms that nothing should be permitted to compromise the education of physicians. The above recommendation, if translated into policy, would represent such a compromise.

"The AAMC believes that the time and energy of medical students must not be diverted from educational into service channels. The fact that student work may have some service significance is entirely incidental to the educational program. The clinical clerkship demands special supervision. Patient selection, the degree and kind of student responsibility involved, must be determined entirely upon educational grounds.

"While the Association recognizes that the intern plays a more responsible role in patient care than does the medical student, it nonetheless submits that the internship should also be deliberately directed toward an experience that is primarily educational. Therefore, service considerations, while consistent with the best interests of patients, should be secondary to the clinical responsibility that is involved, should still be selective, and should be based upon the intern's educational needs.

"Since the internship is conducted in the name of education, and since the medical schools of this country play a major role in the education of physicians, the Association believes that recommendations aimed at removing the medical school hospital from the field of intern education should be rejected."

And finally the Committee recommended and obtained approval to the general thesis that a compulsory two-year rotating internship would not be acceptable to the Association.

Hugh E. Luckey
Chairman

Report of the Committee on Licensure Problems

The increasing tendency for medical educators and those responsible for licensure at the state level to manifest mutual interest in each others' problems is noted with pleasure. There are still many state boards where medical educators are not represented, but at the national level the interest of educators in the activities of the Federation of State Medical Boards and the interest of Federation members in the ac-

tivities of the Association of American Medical Colleges is gratifying.

The Committee concerned itself with three areas:

I. *Problems Related to Changes in Curriculum of Medical Schools*

The several experiments in medical education as well as the continuing changes in various state licensure requirements make it important that some thought be given to the possibility that graduates of approved medical schools may find themselves ineligible for licensure on the basis of some technicality. It is appropriate that information be collected as to whether any states require minimum numbers of hours of undergraduate instruction in certain specific clinical or pre-clinical disciplines. In this way, educators who are reducing the number of hours in certain subjects may be made aware of any possible risk that their future graduates might thereby be made ineligible for licensure in certain states. The Federation of State Boards will probably discuss this at the Congress in Chicago in 1959. Indeed, at the Annual Federation dinner in February of 1958, Dr. David B. Allman, president of the American Medical Association and a longtime active member of the Federation of State Medical Boards, urged the Federation to do nothing which might hinder experiments in medical education.

Inherent in certain experiments, contemplated or under way, is the elimination of the traditional internship and the integration of the functions served by the internship into the final year of the undergraduate program. In this regard, it should be noted that, since Pennsylvania first introduced the requirements of an internship for licensure in 1914, there has been a steady increase in the number of states which have such a requirement. At the present time 31 states, or 32 if we may include Alaska, plus the District of Columbia, Canal Zone, Guam, Hawaii, and the Virgin Islands have such a requirement. Eleven boards specify that the internship must be a rotating service. This makes it important to determine whether all of those states which require an internship will accept, as fulfilling this requirement, the final year of medical school in institutions where such experiments are underway. This is a question which should be of concern also to the national boards.

At the same time, it would be well to be sure that those states which require a rotating internship do not have requirements which are inflexible and which include small amounts of time in certain specialty areas. This last item is of interest not only to medical schools but to some 840 hospitals which offer rotating internships.

II. *Foreign Trained Physicians*

With respect to the matter of foreign trained physicians it is too early to know what influence the activities of the educational council for foreign medical graduates will have, if any, on the licensure problems of persons who were trained abroad. While the ECFMG properly disclaims any purpose to influence licensure for those who are evaluated by it, it will be interesting to observe during the next few years whether it may have some unintended influence in this direction. The number of foreign physicians in internships and residencies continues to increase. For the year 1957–58 the Institute of International Education reported a total of 7,622 alien interns and residents compared to a total of 6,741 for the year 1956–57. As aliens these interns and residents reported by the IIE are ineligible for licensure in all except four states and the District of Columbia. However, there is no available evidence to suggest a decrease in the number of citizens and immigrants trained abroad who can apply for licensure.

III. *Licensure for Residents*

In the early records of this Committee following its organization in 1952 there was discussion of the desirability of requiring some form of licensure for Hospital residents. At that time, sentiment seemed to favor a temporary and limited licensure; perhaps one consideration was the hope that this would facilitate further interchange between teaching centers. The Committee now recommends for serious consideration the proposal that residents who are eligible for licensure be required to have permanent licensure in the states where they are obtaining their training. The evolution of several circumstances during the 6 years since the inception of this Committee contributes to this recommendation for permanent licensure. There seems to be less tendency for persons to move about during their training from one institution to another and there would appear to be an increase in the pattern of so-called "block" rather than "pyramidal" type of residencies permitting more people to complete their training in a single center. In this regard the tendency among certain of the specialty boards to specify a progressive increase in responsibility during resi-

dency training, and, in some instances, the requirement that the culmination of the training period be an experience designated as a full residency may tend to make the pyramidal system less attractive than the block system. Another possible contributing factor to the tendency for a trainee to remain in one place for all or most of his training may exist in the evidence that an increasing number of residents are married and have families.

Altogether apart from the board requirements there has been an increasing tendency in teaching residencies for residents to be granted or to assume much more responsibility than was true in an earlier day. Perhaps the increasing length of residency training justifies this. In any case, this responsibility should be bulwarked by the most appropriate form of licensure.

A disturbing factor at the present time is the inexorable increase in malpractice suits and the tendency to direct the suit at a number of persons, including the resident. It is believed that in defense of such suits the position of the resident will be more secure if his license in the state where he is training is a full and unrestricted license.

In this regard it is appropriate also to have in mind the recommendations of the Committee on Medical Care Plans and the tendency to include residents in a group practice arrangement whereby they can contribute to their own support by the collection of insurance fees. In such a situation, full licensure is necessary.

It is noted that the state boards themselves have been interested in this matter as reflected in the fact that whereas in 1952, when this Committee was created, 21 states and Puerto Rico required some form of licensure of residents, there are now 29 boards which require some form of licensure for residents. In seven boards the registration must be in the form of a regular license. Additional boards which do not have the requirement, nevertheless recommend licensure and in at least two states, independent of the state boards, the hospitals have traditionally required licensure.

Although it is not appropriate for the AAMC to urge any change in legislation in this regard, it is entirely appropriate that the individual members in their own teaching hospitals sponsor the requirement of permanent licensure for eligible members of the resident staff.

James E. McCormack
Chairman

Report of the Committee on Medical Care Plans

At the 1957 Annual Meeting, the Committee on Medical Care Plans presented to the membership a statement called "Institutional Group Practice by Clinical Faculties of Medical Schools, a Statement of Principles."

Also at that time the Committee recommended that this statement be referred to the Executive Council for final disposition. That was done, and the Council, making some minor changes in the statement, circulated it among the deans of the medical schools with the request that they consult their faculties and channel back to the Committee any criticisms or recommendations.

We had responses from thirty-one medical schools. They were analyzed, tabulated, and considered by the Committee. In view of the variety of responses, the Committee decided not to reframe the resolution at the beginning of this convention, but rather to have a closed meeting and then open hearings before making any further recommendations.

At the closed meeting on October 12, the Committee analyzed its own preliminary report, and recognized that there were two distinct types of practice embodied in the one report: One was the provision of medical service on paying patients by full-time members of the clinical faculties, and the other was the provision of medical service on paying patients by residents.

In order to facilitate discussion and action, the Committee decided to draw up two separate statements embodying each of these. This was done, and the two statements ultimately were brought out at the open hearing, which was well attended.

The first statement embodying the provision of medical service on paying patients by full-time clinical faculties was approved without any real dissent at all during the open hearing.

However, the second statement on the provision of medical service on paying patients by residents ran into a few difficulties—despite the fact that this statement had been previously presented to the Committee on Internships, Residencies and Graduate Medical Education and, with minor changes in working, had been endorsed by that Committee. Some of the participants objected on the ground that its adoption would result in over-concern on the part of residents to the detriment of the educational program, precipitate strife with local medical

societies, and cause interpersonal dissatisfaction among residents in hospitals not associated with medical schools. It was pointed out by one participant that payment for resident's services was specifically prohibited under the Medicare program.

On the contrary, those supporting this resolution pointed out that, in some hospitals, payments were collected by staff physicians with resulting exploitation of residents and some implication of ghost surgery and other unethical practices, or the funds were withheld by the third party responsible for payment. It also was pointed out that one stipulation in our statement did obviate any charge of improper practice of medicine.

There seemed to be general agreement that the statement emphasized the economic aspects rather than the educational aspects, and did not clearly bring out the real objectives behind the statement which were, first, to recapture the third party payments for medical service rendered by residents as an essential part of their clinical training, and second, to provide for the assumption by residents of full responsibility for care of patients, including paying patients which is essential in the terminal phases of preparation for practice of a specialty.

The following statements of principle were presented to the deans for discussion. It was voted to refer the statements to the Executive Council for study and recommendation.

Secretary's Note: (The statements appear in this annual report as corrected by action of the Executive Council as recommended by a vote of the deans. At the close of the meeting on Oct. 12, the Council announced that it had approved the statements in principle but that they should be referred for the consideration and recommendation of the Liaison Committee on Medical Education before final action is taken. This recommendation was approved.)

Provision of Medical Service for Paying Patients by Full-Time Clinical Faculties of Medical Schools

A STATEMENT OF PRINCIPLES

Medical service prepayment plans have caused a marked change in the socio-economic status of the patients who seek the high level of medical care available in the nation's medical centers. To provide this care and to meet the needs of modern clinical instruction, there has necessarily been an increasingly great expansion of the full-time component of clinical faculties. Additional impetus has resulted from the public demand for the conquest of disease and disability and for an ever higher level of medical care.

To safeguard the future of medical education and to make provision for the continuing attainment of the health needs of the nation, the major problems confronting the clinical faculties of medical schools must be determined and possible solutions explored. One obvious problem is the retention of the present complement of clinical teachers and investigators; a second, the recruitment of additional clinical teachers and research workers to attain the objectives of a modern teaching center—the source of the practitioners, teachers and research workers on whom ultimately the level of the nation's health depends.

The financial plight of many of our medical schools precludes the most obvious solution of these two problems—payment of adequate salaries out of university funds. Hence, since medical service and clinical instruction are interdependent, supplementation of the base salary paid by the university or medical school by fees for the medical service rendered is not only logical but necessary.

It is the opinion of the Committee that in thus supplementing their base salaries, full-time clinical teachers, at least in many institutions, have instituted informally or formally a type of group practice. Such collaborative medical practice is proper, provided:

a. That fees are set by the participating physicians.
b. That that income from fees is deposited in a separate fund or funds in the business office of the university or medical school.
c. That disbursements are made in accordance with a plan mutually agreed upon by the university and the faculty members involved.
d. That the amount of medical service and the number of physicians providing such service are related to the educational and research requirements of the institution.

The decision to approve limited private practice by full-time clinical faculty or the type of practice in any given institution must rest with the faculty and university administration. It is not the intent of the committee to impose a uni-

form policy on medical schools or their associated hospitals.

Committee on Medical Care Plans
John F. Sheehan, *Chairman*
Donald G. Anderson
R. C. Buerki
Richard O. Cannon
H. B. Mulholland

Provision of Medical Service for Paying Patients by Residents

Hospital and medical service pre-payment plans are sharply modifying an earlier concept of centering clinical instruction of medical students, interns and residents around the indigent patient. Medical education requires a variety of patients, sufficiently numerous to provide a high level of bedside instruction. The steady diminution in the number of ward patients requires a continuing readjustment in our dependence upon private patients and those covered by prepayment insurance plans to insure adequate instruction of medical students, interns and residents.

The assumption of full responsibility for patient care is essential in the advanced stages of preparation for the practice of a specialty.

The health demands of the public, the explosive growth of medical knowledge and the obligation of a profession to render increasingly effective service present the developing physician with another problem—a long period of education and training for practice, particularly of a specialty, which is uneconomic for the individual concerned and the university or medical school responsible for the training.

All of these considerations warrant a close look at the disposition of funds made available through medical service furnished paying patients by residents in the course of their clinical training. It is proposed that such funds be used for the support of resident-training programs.

Furthermore, it is maintained that the receipt by qualified residents of financial remuneration from the paying patients when they serve in conjunction with their clinical training is proper, provided:

a. That, in the judgment of the physicians directing their education and training, these residents have reached a stage of competency adequate for the assumption of appropriate responsibility.
b. That they possess a license to practice medicine in the state in which is located the institution in which they serve as residents.
c. That they have the consent of the patients for whose care they assume responsibility.
d. That fees received by these residents are deposited in a fund or funds to be used exclusively for the support of resident-training programs. Such fees shall not accrue to the general operating income of a hospital, medical school or university.
e. That the medical service is rendered in the institution where the residency appointment is held and is related to the requirements of a specific resident-training program.
f. That fees do not accrue to the individual resident providing the medical service.

The decision to approve such participation by residents in any given institution must rest with the faculty conducting the training program and the corresponding university administration.

Committee on Medical Care Plans
John F. Sheehan, *Chairman*
Donald G. Anderson
R. C. Buerki
Richard O. Cannon
H. B. Mulholland

Report of the Committee on Medical Education for National Defense

The Committee records with sorrow the death of one of its members who for so many years was the capable and effective chairman of this group. Dr. Stockton Kimball provided leadership and initiative in promoting the welfare of our medical schools in relation to military matters. We are all indebted to him for the unselfish efforts put forth on our behalf. We shall miss Stockton keenly as we try to carry on without him.

The Committee on Medical Education for National Defense met in special session in September, 1957, to review with representatives of the Department of Defense the serious cutback in funds imposed by failure of Congress to allocate any funds to FCDA for delegate agencies and by the decisions of the Surgeons General of the Navy and the Air Force to reduce the allocations from these departments by $30,000

each. A reduced budget was recommended which gave priority to the newer schools participating in the MEND Program.

Also in September, Dr. Darley, Dr. Youmans, Dr. Kimball, and Dr. Olson represented the AAMC at a meeting called by Dr. Harvey Stone, Chairman of the Task Force for Health Manpower of the Office of Defense Mobilization. This meeting brought together representatives of the AAMC, the American Medical Association, and the American Dental Association with representatives of the Army, Navy, Air Force, USPHS, and FCDA, who make up the Inter-Agency Advisory Board.

At the request of the Executive Council, the Committee assumed the responsibility for arranging the program for the Joint Meeting of the Executive Council with the deans and government representatives at the Association's Annual Meeting in Atlantic City. A program entitled, "Medical Education in Preparation for a Total National Emergency," consisted of presentations and panel discussions by representatives of the armed services, the Department of Defense, the Office of Defense Mobilization, the Health Resources Advisory Committee, and members of the Association's Committee.

At its October meeting the Committee took cognizance of the progress toward strenghening the Health Section of the Office of Defense Mobilization, as evidenced by the appointment of Dr. Palmer Dearing to the position of Assistant Director for Health, and by the creation of the Task Force for Health Manpower under the chairmanship of Dr. Harvey Stone of the Inter-Agency Advisory Board. The Committee recommended that the Association work closely with the Task Force in approaching the problems of medical education in time of national emergency and that efforts be made to guide the decisions of the Task Force so that even during emergency situations sound educational programs in medicine might be maintained. It was further recommended that efforts be made to insure that policies regarding educational manpower requirements not be formulated solely by civilian physicians primarily concerned with the allocation of medical manpower between the military and civilian population.

The Committee recommended that the President of the Association direct an official request to the Chief Medical Director of the Veterans Administration, officially endorsing the proposal that medical schools consider individually the use of Veterans Administration Hospitals in non-urban areas as potential sites for relocation of clinical teaching in the event of enemy destruction of normal clinical facilities.

It further recommended that each school be requested officially by the Association to proceed with the development of emergency plans for continuation education in the event that normal facilities were destroyed or damaged. There should be appropriate methods devised for exchange of information between the deans and the Association of development of emergency plans either by the schools or by the Association.

Following the Association's annual meeting in Atlantic City, the Committee was expanded by the addition of the following members, most of whom have served previously on the Subcommittee for the MEND Program:

Loren C. Carlson, Professor of Physiology, U. of Washington School of Medicine
Lawrence W. Hanlon, Associate Dean, Cornell U. Medical College
Thomas F. Whayne, Vice Dean, U. of Pennsylvania School of Medicine
John B. Youmans, Dean, Vanderbilt U. School of Medicine

The Liaison Committee of the American Medical Association and the Association of American Medical Colleges at its meeting in October in Atlantic City appointed a special subcommittee with representation from both groups to deal with the problem of medical education in the event of national emergency. Dr. John Youmans, Dr. Stockton Kimball, and Dr. Stanley Olson were appointed to represent the Association on this Liaison Committee, which met first in December in Chicago under the chairmanship of Dr. Stockton Kimball. The Committee discussed fully the many problems inherent in the provision of medical education in the event of total or partial mobilization, such as accelerated programs, increased responsibility of paramedical personnel, relocation sites for schools, determination of essential faculty; consideration of curriculum modification to accelerate education of physicians, and to train medical students to be effective participants in emergency situations; coordination of knowledge and information in areas of knowledge of specific importance.

Inquiry was made by Dr. Edward Turner to the Council on National Defense of the A.M.A. as to the possibility of forming a tripartite com-

mittee with representation from the Council on National Defense, to develop and maintain liaison with that group and facilitate exchange of ideas. The Council on National Defense was agreeable to this suggestion and sent representatives to the next meeting which was held on January 24, 1958, in Chicago.

At this meeting it was determined that the committee should serve to bring the interests of medical education and medical practice together in planning with representatives of government for the conduct of medical education in time of national emergency. The status of the civilian medical groups in relation to the needs of the Armed Forces now and in the future was reviewed. While no definite policies were recommended, this meeting was helpful in exploring the broad problem.

In March, 1958, Dr. Darley, Dr. Bowers, and Dr. Olson met together with representatives of civilian and military groups and of Selective Service in Dr. Frank Berry's office to review proposals for extension of the Universal Military Training and Service Act when it expires June 30, 1959. The general consensus was that the present act was reasonably good and that it would be recommended for a two-year extension to the 82nd Congress.

The Executive Council, sensing the urgency of the present world crisis, moved to accelerate the consideration of what the medical schools might best do in the event of a national emergency by appointing an *ad hoc* committee consisting of Dr. Stanley W. Olson, Chairman, Dr. John Hirschboeck, Dr. John Deitrick, Dr. George Aagard, Dr. George Armstrong, Dr. John Bowers, Dr. John Youmans, and Dr. Ward Darley. This group met on May 23, 1958, and while considerable thinking was developed, it was concluded that it would help materially if the Office of Defense Mobilization (now the Office of Defense and Civilian Mobilization) would indicate the kinds of situations which the medical schools should plan for. Accordingly, a letter which envisioned the kinds of situations that had prompted the committee's thinking so far, was forwarded to Washington. The key paragraphs in this letter, directed to Dr. W. Palmer Dearing, Office of Defense and Civilian Mobilization, which are herein quoted, followed a preliminary discussion between the Executive Director and the "Hess Committee" at the time of the June A.M.A. meeting in San Francisco.

"The last few minutes of my discussion with the Hess Committee dealt with a matter that I believe should primarily come from your office, namely, a statement as to the kinds of situations which the medical schools should plan for. I envision at least four such kinds of situations: (1) something like the status quo when things like the MEND program should be pushed as expeditiously as possible and when plans for the other three kinds of situations should be developed; (2) what I call "total mobilization without military action," in other words, a situation in which all of this nation's resources would be poised for attack and defense; (3) the situation that would pertain after attack and one that would be associated with massive civilian casualties. It would be assumed here that our educational programs would all be stopped and that those teaching medical centers still intact would have become a part of the service resources of the country. (4) A time when the programs in medical education would be resumed.

"Before our various planning committees resume work, I wonder if it would be possible for your office to give us whatever ideas it might be developing along the above lines."

The *ad hoc* committee further felt that until such time as a general mobilization situation might develop, the medical schools should be doing everything possible in anticipation of this time. The committee submitted that the program now known as MEND, which is now in effect in half of our medical schools, represents such an important step. The MEND program should be extended to all medical schools.

The *ad hoc* committee also felt that the AAMC should develop and keep up to date a faculty registry which would contain the vital statistics usual to such a registry plus a summary of professional and academic qualifications, the teaching and research load carried and a statement as to past and present military status. Such a registry would be essential if a medical school is to have the information essential to adjustment to a national emergency.

In line with the thinking of the *ad hoc* committee the Committee on Medical Education for National Defense believes that all of the medical school coordination having to do with medical education for national defense should be moved to the office of the AAMC. This would centralize the approach to both the medical schools and the defense planning and mobilization authorities of the national government. If this were to be done, the AAMC would need the necessary full time, knowledgeable staff, and the additional office space, equipment and financing that such staff would require.

Dr. Stanley Olson, *Chairman*	Dr. George Armstrong
Dr. John Hirschboeck	Dr. John Bowers
Dr. John Deitrick	Dr. John Youmans
Dr. George Aagaard	Dr. Ward Darley

Report of Subcommittee for the MEND program:

The subcommittee for the MEND Program has met on three occasions—in October at Atlantic City, in February at Chicago, and in June at San Francisco.

As of 1 January 1958, the following ten schools were added as MEND participants, making a total of 45 schools included in the program:

Bowman Gray	Miami
Columbia	Northwestern
Albert Einstein	Oklahoma
Howard	Rochester
Iowa	Virginia

At the same time, the Mayo Foundation-Graduate School of the University of Minnesota was added as a non-funded MEND participant. (One other school—Cincinnati—participates on a non-funded basis, bringing the total of all schools participating to 47.)

The following schools were selected for inclusion in the program as of January 1, 1959:

Boston	Meharry
Cincinnati	Nebraska
George Washington	Puerto Rico
Indiana	Southwestern
Marquette	SUNY (Syracuse)

Two symposia were presented this year, one conducted by the Army in March and the other by the USPHS in May. Both these symposia were well attended—the symposium on Management of Mass Casualties at Walter Reed Army Institute of Research attracting 64 participants, and the USPHS presentation of Medical Aspects of Highway Safety at Ann Arbor attracting 102 participants. The annual orientation conference and tour for the deans and coordinators of the new schools was planned and executed.

A two-day conference was held during the Association meetings in Atlantic City on "Medical Education in a Wartime Emergency." The participants (103), including representatives of the federal service and non-governmental medicine, considered problems related to the continuation of medical education in a wartime emergency and made recommendations for the organization of such activities.

During the year the "MEND Speakers List," containing over 250 suggested guest lecturers on topics related to military and disaster medicine, was completed and distributed to MEND-affiliated medical colleges. In addition, two addenda to the original "MEND Reference List" were prepared and distributed for the use of coordinators.

Dr. Schofield as the National Coordinator and Mr. Don Smith, his administrative assistant, have continued to serve most effectively in meeting the objectives of the MEND program by extending the vast educational resources of the armed forces and other federal agencies to the medical schools of this country.

Dr. Schofield submitted his resignation, effective June 30, 1958, in order to assume once again his full-time responsibilities as Assistant Dean and Assistant Professor of Anatomy at Baylor University College of Medicine. A resolution of commendation for his outstanding service to the MEND program as National Coordinator was adopted by the MEND Subcommittee.

Capt. Bennett F. Avery (MC) USN, has been appointed to serve as the National Coordinator, effective July 1, 1958. Captain Avery will continue on active duty with the Navy, but will be assigned exclusively to the MEND program. His most recent assignment has been that of editor of the Armed Forces Medical Journal.

Stanley W. Olson
Chairman

Report of the Committee on Veterans Administration–Medical School Relationships

No matters have been brought to the attention of your Committee which required a formal meeting. Several developments in the Department of Medicine and Surgery of the Veterans Administration however are of interest to Medical Schools and are worth noting.

The pay bill, PL 85-462 was finally passed by the Congress and signed by the President, June 20, 1958. The top salary for Chief Grade is now $16,000. This bill was strongly supported by many Deans who took the trouble to write members of the Committee. The present salary scale should enable the Veterans Administration to retain many more of their best physicians who in the past had been forced to resign because of the salary scale.

The newly established Clinical Investigator Program affords an opportunity for selected individuals who have completed their formal clinical training and who aspire to a career in research and teaching to devote three quarters of

their time to research for a period of one to three years. Candidates are nominated by the Hospital Research Committee with Deans' Committee approval. They may or may not have been previously in the Veterans Administration, and there is no commitment or obligation to remain in it. This program should provide a significant contribution to the pool of trained clinical investigators. The Veterans Administration is to be congratulated on this contribution to American medicine.

At present more than 60 medical schools assigned third or fourth year clerks to VA hospitals. Some 39% of third year students and 33% of fourth year students in the country spent some of their valuable time in these hospitals. These facts emphasize the interest that medical educators must necessarily have in the quality of teaching, research, and medical care in our VA Hospitals.

At the closed meeting held on Sunday, Oct. 12, and at the open meeting held Oct. 11, the Committee reviewed with much interest the report prepared by Dr. Nunemaker on the questionnaire submitted to the deans' committee and managers in November, 1957, asking their opinion of VA-medical school relationships. The Committee understands that Dr. Nunemaker has submitted this manuscript to the editor of the *Journal of Medical Education*.

Your Committee reiterates its recommendation of a year ago that the Executive Council make an evaluation of the Veterans Administration-medical school relationships under the auspices of the Association.

This report has been moved for adoption.

Joseph M. Hayman, Jr.
Chairman

The motion was seconded, put to a vote, and carried.

Report of the Nominating Committee

The Committee offered in nomination the following group of officers, including the new office which was established in the modification of the Constitutions at this meeting.

President-Elect, Thomas H. Hunter
Vice-President, Walter Reese Berryhill
Secretary, Richard H. Young
Treasurer, J. Murray Kinsman
Council Member, John Sheehan for a second term.
Council Member, John E. Deitrick
Council Member to replace Dr. Hunter, George A. Wolf, Jr.

John B. Truslow
Chairman

The report was accepted and the nominees elected by unanimous ballot.

Wednesday, October 15, 1958

Following the morning program, the president called for a short business session. He referred to the October 12, special meeting at which time the question of a section of medical school affiliated hospital directors had been under discussion. The president recalled that the Council was to report to the membership as to the manner in which this matter should be handled. In accordance with this understanding the president announced that a new standing committee on medical school-affiliated hospital relationships would be established, that the hospital administrators would be encouraged to develop their program, but this in cooperation with the Association through the medium of this new committee. The decision of the Council was approved.

The chair then called for the presentation of the new president, Dr. John McK. Mitchell who took over as presiding officer and adjourned the meeting.

The following committee members were selected by the Executive Council to serve for the year 1958–59:

Audio-Visual Education
Frank Woolsey, Albany, *Chairman*
A. J. Gill, Southwestern
Joseph Markee, Duke

Borden Award
George Burch, Tulane, *Chairman*
Edwin B. Astwood, Tufts
Vincent Du Vigneaud, Cornell
Alfred Gilman, Albert Einstein
Thomas B. Turner, Johns Hopkins

Continuation Education
Wesley Eisele, Colorado, *Chairman*
Clarence E. de la Chapelle, New York University
Mahlon Delp, Kansas
Robert B. Howard, Minnesota
Albert G. Mackay, Vermont
W. F. Norwood, College of Medical Evangelists

Editorial Board
John Z. Bowers, Wisconsin, *Chairman*
Stanley E. Bradley, Columbia
Melvin A. Casberg, Texas
Julius H. Comroe, Jr., California-Berkeley
John A. D. Cooper, Northwestern
T. Hale Ham, Western Reserve
George T. Harrell, Florida
Vernon W. Lippard, Yale
W. Frederick Norwood, College of Medical Evangelists
Kenneth E. Penrod, Duke

Financing Medical Education
George Armstrong, New York University, *Chairman*
Donald G. Anderson, Rochester
Robert C. Berson, Alabama
Melvin A. Casberg, Texas
Joseph C. Hinsey, Cornell
Homer Marsh, Miami
Robert A. Moore, SUNY-Brooklyn
Isadore Ravdin, Pennsylvania

International Relations in Medical Education
Robert A. Moore, SUNY-Brooklyn, *Chairman*
Thomas Almy, Cornell
Wiley Forbus, Duke
H. Van Zile Hyde, Div. International Health, USPHS
Elizabeth Lam, Consultant, Committee on International Exchange of Persons
Maxwell Lapham, Tulane
O. R. McCoy, Consultant, China Medical Board of New York, Inc.
Norman Nelson, Iowa
Virgil Scott, Rockefeller Foundation
Francis Scott Smyth, California-San Francisco
Myron Wegman, Consultant, Pan American Sanitary Bureau

Flexner Award
William Bean, Iowa, *Chairman*
W. O. Fenn, Rochester
Louis Flexner, Pennsylvania
Vernon Lippard, Yale
Robert F. Loeb, Columbia
Rolf C. Syvertsen, Dartmouth

Internships, Residencies and Graduate Medical Education
E. Hugh Luckey, Cornell, *Chairman*
George N. Aagaard, University of Washington, Co-Chairman
Howard Armstrong, Illinois
Robert J. McKay, Vermont
Carl Moyer, Washington University
R. D. Pruitt, Mayo Foundation
Milton Rosenbaum, Albert Einstein
Lyman M. Stowe, Stanford
Samuel Trufant, Cincinnati

Licensure Problems
James E. McCormack, Columbia-Presbyterian Hospital, *Chairman*
Stiles D. Ezell, SUNY-Albany
John P. Hubbard, Pennsylvania
John Parks, George Washington
Ralph Snyder, New York Medical

Medical Care Plans
John F. Sheehan, Stritch-Loyola, *Chairman*
Donald G. Anderson, Rochester
Robin Buerki, Ford Hospital, Detroit
Richard Cannon, Vanderbilt
Henry B. Mulholland, Virginia

Medical Education for National Defense
Stanley W. Olson, Baylor, *Chairman*
Melvin A. Casberg, Texas, *Co-Chairman*
George Armstrong, New York University
John Z. Bowers, Wisconsin
Lawrence Hanlon, Cornell
William Stone, Maryland
John B. Truslow, Texas-Galveston
Thomas F. Whayne, Pennsylvania

Program, 1959 Annual Meeting
John McK. Mitchell, Pennsylvania, *President and Chairman*
Lowell T. Coggeshall, Chicago, *Immediate Past President*
Thomas Hunter, Virginia, *President-Elect*
Richard H. Young, Northwestern, *Secretary*

Public Relations
John D. Van Nuys, Indiana, *Chairman*
George Armstrong, New York University
Charles S. Cameron, Hahnemann
Evan Edwards, American College Public Relations Association, University of Colorado

Jack Fletcher, National Institutes of Health, Bethesda, Maryland
Robert Glaser, Colorado
Thomas Hunter, Virginia
Francis Pray, Vice President, Council on Financing Higher Education
Arthur Snider, National Association of Science Writers, Chicago

Research and Education
Robert Glaser, Colorado, *Chairman*
George Packer Berry (Teaching Institute), Harvard
John L. Caughey, Jr. (Student Affairs), Western Reserve
John T. Cowles, Pittsburgh
Thomas H. Hunter, Virginia
Carlyle Jacobsen, SUNY-Syracuse
William E. Reynolds, Washington
Julius B. Richmond, SUNY-Syracuse
William Schofield (Research and Testing), Minnesota
Thomas B. Turner, Johns Hopkins

Veterans Administration-Medical School Relationships
Granville Bennett, Illinois, *Chairman*
Robert C. Berson, Alabama
John E. Deitrick, Cornell
A. J. Gill, Southwestern
E. Harold Hinman, Puerto Rico
Clayton Loosli, University of Southern California
Vernon E. Wilson, Kansas

Medical School-Affiliated Hospital Relationships
Donald Anderson, Rochester, *Chairman*
Donald J. Caseley, Illinois
Dean A. Clark, Harvard
Gerhard Hartman, Iowa
Robert B. Howard, Minnesota
Duane E. Johnson, Nebraska
J. Murray Kinsman, Louisville
Houston, H. Merritt, Columbia
Henry N. Pratt, New York Hospital
Charles Rammelkamp, Western Reserve

Advisory Board for Medical Specialties
Stanley E. Dorst, Cincinnati
William A. Sodeman, Jefferson

Advisory Council for the National Fund for Medical Education
Charles A. Cameron, Hahnemann
Joseph C. Hinsey, Cornell
Robert A. Moore, SUNY-Brooklyn

American Council on Education
William J. McGlothlin, Louisville
Jonathan E. Rhoads, Pennsylvania

Member of Internships Review Board of the Council on Medical Education & Hospitals
James Campbell, Illinois

National Board of Medical Examiners
Charles Cameron, Hahnemann
Robert A. Moore, SUNY-Brooklyn
Richard H. Young, Northwestern

National Health Council
Richard Cross, Columbia
William Hubbard, Jr., New York University
Ralph Snyder, New York Medical

Advisors to Institute of International Relations
Duncan Clark, SUNY-Brooklyn
Lawrence W. Hanlon, Cornell
L. Emmett Holt, New York University
Aura E. Severinghaus, Columbia
Ralph E. Snyder, New York Medical

Educational Council for Foreign Medical Graduates
J. Murray Kinsman, Louisville
John McK. Mitchell, Pennsylvania

National Intern Matching Program
Lowell T. Coggeshall, Chicago
John Van Nuys, Indiana
George A. Wolf, Jr., Vermont

Nominating Committee—1959
Norman Nelson, Iowa, *Chairman*
Robert Alway, Stanford
Donald Anderson, Rochester
E. Harold Hinman, Puerto Rico
John Truslow, Texas

Liaison Committee with Council on Medical Education and Hospitals
Lowell T. Coggeshall, Chicago
Thomas Hunter, Virginia
John McK. Mitchell, Pennsylvania
Richard Young, Northwestern

Officers of the Association of American Medical Colleges

1958–1959

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Treasurer: J. MURRAY KINSMAN . . . University of Louisville
Immediate Past President: LOWELL T. COGGESHALL . . . University of Chicago
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Executive Director; WARD DARLEY . . . AAMC

GORDON H. SCOTT . . . Wayne State University
MARK EVERETT . . . University of Oklahoma
JOHN E. DEITRICK . . . Cornell University
JOHN F. SHEEHAN . . . Stritch (Loyola University)
STANLEY W. OLSON . . . Baylor University
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ITEMS OF CURRENT INTEREST

Faculty Military Reserve Status

The National Advisory Committee to the Selective Service System has voted to notify medical schools and hospitals that if any of their staff or faculty are members of the Ready Reserve, they and the individuals concerned should make note of the fact that they will be expected to go when called and not be declared essential to the institutions at the time such a call is made.

If any such individuals are now in essential positions—either on faculty or staff—they should request transfer from the Ready Reserve to the Standby Reserve; otherwise the Ready Reserve is not a Ready Reserve.

By making such transfer they will, of course, lose pay. They will not lose credit toward retirement.

This should be looked into at the present time and straightened out now rather than waiting for an emergency to occur. In other words, it is essential for the medical schools and the hospitals to determine the military status of the members of their faculties and staffs. In that way and only that way will they realize what their loss would be on the day an emergency is declared.

This obligation of members of the Ready Reserve to serve when called also applies to physicians in private practice. Only in very exceptional cases would such individuals be given consideration for delay due to essentiality.

National Health Forum to be held

Leaders in the fields of industry, labor, medicine, and public health will meet in Chicago, March 17–19, to consider means of combating an estimated one billion dollar loss through ill-health of the nation's workers. Announcement of the meeting was made by Dr. NORVIN C. KIEFER, president of the National Health Council, on behalf of its 64 national agency members. Dr. JAMES H. STERNER, medical director of Eastman Kodak Company, Rochester, N.Y., is chairman of the planning committee.

Dr. Kiefer characterized the forthcoming Forum as a move toward fuller mobilization of the resources of the professional associations and health agencies in aiding management and labor to combat health hazards and promote health. Forum discussions will identify and stimulate action for improvement in preventive health services for people who work.

Dr. ARTHUR S. FLEMMING, Secretary of the Department of Health, Education, and Welfare will be one of the principal speakers.

Appointments to Consultant Group on Medical Education now complete

Four additional members have been appointed to the Surgeon General's Consultant Group on Medical Education, thus bringing the group's membership to 21, the total originally planned. Completing the group are: Dr. ROBERT C. ANDERSON, Director, Southern Regional Education Board, Atlanta, Ga.; Dr. ALVIN C. EURICH, Vice-President, The Fund for the Advancement of Education, New York; JOHN G. SEARLE, President, G. D. Searle & Co., Chicago; and the Very Rev. ROBERT J. SLAVIN, President, Providence College, Providence, R.I.

The group, composed of leaders in medicine, education, and public affairs, has been invited by Dr. LEROY E. BURNEY, Surgeon General of the Public Health Service, to recommend methods of providing the Nation with adequate numbers of well-qualified physicians over the next decade. Chairman of the group is FRANK BANE, former executive secretary of the Council of State Governments.

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Full information about these products will be sent on request.

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The committee will hold its next meeting February 19–20 at the Department of HEW in Washington.

Haiti Psychiatric Institute to open

The Haiti Psychiatric Institute will begin operation in February, in Port-au-Prince, Haiti. According to Dr. NATHAN S. KLINE, director of research at Rockland State Hospital, Orangeburg, N.Y., it is the world's first hospital in which treatment of the mentally ill will be based primarily on drug therapy. Under the direction of Dr. LOUIS MARS, psychiatrist and Minister of Foreign Affairs for Haiti, the project is being financed by three of this country's pharmaceutical companies: Schering Corporation, Hoffmann-LaRoche, Inc.; and Wyeth International. It will be carried out under the auspicies of MEDICO (Medical International Corporation), the Government of Haiti, and the Department of Mental Hygiene of the State of New York. Dr. Kline will serve as consultant to the Haitian program. Though the first objective is to improve the care and treatment of the mentally ill in Haiti, the purpose is to determine if presently available drugs and adequate treatment facilities are not a more economical and more socially constructive method of treatment than the traditional method of institutionalizing mental patients.

First International Medical Conference on Mental Retardation to meet

The first International Medical Conference on Mental Retardation, organized by the Maine chapter of the American Academy of Pediatrics, the Division of Maternal and Child Health, Maine Department of Health and Welfare, and the Pineland Hospital and Training School, Maine, will be held July 27–31 at the Eastland Hotel, Portland, Me.

The conference is open to all physicians throughout the U.S., Canada, and other countries of the world. The tentative program, including registration and reservation forms will be made available shortly.

AMA membership in National Health Council re-established

The Board of Directors of the National Health Council re-established the membership of the American Medical Association in the Council recently. Action followed the meeting of the Board of Trustees of the AMA in Minneapolis, when it was voted to have the Association re-affiliate with the National Health Council.

The move brought to 64 the membership of the Council which was established in 1921 and is composed of national organizations concerned with health improvement.

Medical Library refresher courses

The second refresher course program sponsored by the Medical Library Association will be given Saturday, June 13, at the King Edward Sheraton Hotel, Toronto, Ontario, Canada. This precedes the Association's 58th annual convention which starts the following Monday.

Twelve courses will be offered covering the most important subjects of special interest to librarians in medicine and related fields. Advance registration is required and further information may be obtained by contacting Miss Ruth Mann, Mayo Clinic Library, Rochester, Minn.

Awards for Manuscripts on Obstetrics and Gynecology

The Division of Obstetrics and Gynecology of the International College of Surgeons is announcing its second annual competition for two awards for the best manuscripts on a phase of obstetrics and gynecology. The first award will be $500 and the second $300.

According to Dr. AUGUST H. DARO, secretary of the Division of Obstetrics and Gynecology, purpose of the contest is to advance the art and science of obstetrics and

gynecology in accordance with the principles of the International College of Surgeons and with the primary aim of the College to extend the frontiers and elevate the standards of all branches of surgery.

Further information may be obtained from Dr. HARVEY A. GOLLIN, 55 E. Washington Street, Chicago.

American College of Gastroenterology offering awards

The American College of Gastroenterology announced the establishment of an award contest for the best unpublished paper on research in gastroenterology or an allied field. This award is to be known as the Henry G. Rudner, Sr. Award, honoring Dr. HENRY G. RUDNER, Sr. of Memphis, Tenn., chairman of the Research Committee of the College and former chairman of the Board of Governors of the organization.

The prize will be an award of $750 plus an additional $250 for travelling expenses to present the paper at the 24th annual convention of the College.

For details, write the Research Committee, American College of Gastroenterology, 33 West 60th St., New York 23, N.Y.

American Heart Association offering awards

The American Heart Association announced the opening of the seventh annual competition for the Howard W. Blakeslee Awards for outstanding reporting in the field of heart and blood vessel diseases. Selections from among newspaper and magazine articles, books, radio and television programs and films published or produced between March 1, 1958 and February 28, 1959, will be made by the awards committee. May 1 will be the deadline for entries. The awards will carry an honorarium of $500 each.

Entry blanks and rules folders may be obtained from local Heart Associations or from the American Heart Association, 44 E. 23rd St., New York 10, N.Y.

Established by the Heart Association in 1952 as a memorial to the late HOWARD W. BLAKESLEE, the awards honor "individuals whose creative efforts in any national or local medium of mass communication are judged to have contributed most to public understanding of progress in research, and in the prevention, care and treatment of heart and circulatory diseases."

NEWS FROM THE MEDICAL SCHOOLS

Arkansas

Construction is expected to begin early in 1959 on a $2 million research building, subsidized by a major grant of $1,066,000 from the Department of Health, Education and Welfare. The building will be attached to the University Hospital and will provide research facilities for the faculty.

Dr. PAUL L. DAY, professor and head of the department of biochemistry, has resigned to accept the newly-created post of Scientific Director of the United States Food and Drug Administration. The Administration is under the supervision of Arthur S. Flemming, Secretary of HEW. As chief scientific advisor to George P. Larrick, Food and Drug Commissioner, Dr. Day will be responsible for coordinating and developing the Administration's scientific projects, including its research programs. Day headed the department of biochemistry for 31 years.

Succeeding Dr. Day will be Dr. JAMES S. DINNING, who has been promoted to professor of biochemistry and head of the department. Dr. Dinning joined the faculty in September, 1948, as an assistant professor, and left in 1952 to spend one year on the University of Pittsburgh faculty. He returned to Arkansas in 1953 and was promoted to associate professor.

U. of California

The first off-campus college level program in Medical Care Administration is being conducted in the San Francisco Bay area by the University of California Extension. The educational program makes it possible for a participant to earn a Certificate upon completion of nine evening courses. Further information may be obtained by writing to the Business Administration Extension, University of California, Berkeley 4, Calif.

Chicago Medical

Dr. MARVIN ZIPORYN will head an expanded residency training program in the department of psychiatry and neurology. Financed by a grant of $15,500 from the Public Health Service, social and cultural studies will now be included in the training program for the psychiatric resident along with his clinical training on the wards, the utilization of seminars, and greater time spent in didactic work.

Colorado

The New York Academy of Sciences has conferred the title of Fellow of the Academy upon Dr. HENRY SWAN, professor and head of the department of surgery. Action was taken at the annual meeting of the Academy held recently in New York City.

George Washington

Dr. J. MARTYN BAILEY, formerly at the Finney-Howell Cancer Research Laboratory, Johns Hopkins Hospital, has joined the faculty as assistant professor of biochemistry.

Hahnemann

Additional surgical laboratories are being built, and provisions have been made for more surgical investigators and technicians as well as new equipment with funds provided by the Public Health Service and the Department of the Army. Surgical research grants totalling $603,551 have been made to the college and hospital through Dr. JOHN M. HOWARD, professor of surgery. According to Dr. Howard, the funds will help Hahnemann place increasing emphasis on research into surgical problems.

Harvard

A five-year grant of $345,078 has been awarded to Harvard University for the general support of a graduate program in biophysics by the National Institute of Arthritis and Metabolic Diseases of the NIH.

Under the direction of associate professor A. K. SOLOMON, the program will have as its primary goal the education of individuals with professional competence in the fields of physics, chemistry, and biology, and will lead to the award of the Ph.D. degree in biophysics. First candidates for the degree will be admitted for the fall term of 1959. Initially, fellowship support is available for four pre-doctoral fellows, two teaching fellows and four summer student fellowships.

Illinois

The National League for Nursing has awarded full accreditation to the School of Nursing at the Chicago Professional Colleges of the University of Illinois for its public health nursing program. The school is one of two in the State to receive accreditation in public health nursing.

Jefferson

Dr. ROBERT IRBY WISE was named Magee Professor of Medicine and head of the department. He succeeds Dr. WILLIAM A. SODEMAN, who became dean of the college on April 22, 1958. Dr. Wise has been on the faculty as assistant professor of medicine since September, 1955.

Johns Hopkins

The new five-year medical education program of the university has been given final approval by the advisory board of the faculty of the school of medicine.

According to university sources, the program will offer an opportunity for properly qualified students to save one, or possibly two years between the sophomore year of college and the completion of medical school, thus reducing the length of time now required for medical students to reach a productive state in practice or research. The new program will combine the teaching of liberal arts and medical science in the earliest years of the curriculum, and its aim is to create better opportunities for students interested in teaching and research to obtain advanced training in the basic medical sciences during the formative years of medical school.

Students who have completed at least two years of college will be admitted into the program beginning in the fall of 1959.

Louisville

D. SIDNEY I. KORNHAUSER, 71, died in his sleep January 1. Dr. Kornhauser had been on the faculty since 1922, holding the rank of professor and chairman of the department of anatomy. He was also chairman of the Committee on Biological Stains and was the author of numerous articles on microscopic anatomy.

Marquette

Dr. JAMES G. HILTON, former associate professor of pharmacology at the University of Mississippi Medical Center, has been appointed associate professor of pharmacology at Marquette. Dr. Hilton becomes the fifth full-time faculty appointment in the department of pharmacology.

Medical Evangelists

The Swedish Medical Society has named Dr. ELIZABETH LARSSON, clinical professor of obstetrics and gynecology, an honorary member. Born in Sweden, Dr. Larsson came to this country in 1920. Winner of the Essay of the Year award by the Los Angeles Obstetrical and Gynecological Society in 1954, she now joins the ranks of the relatively few in the United States who have been so honored by the Swedish Society.

Dr. G. E. NORWOOD has been named assistant dean of the CME School of Medicine.

Formerly assistant clinical professor of obstetrics, Dr. Norwood will assume primary responsibility for the post-graduate section of the school.

Michigan

A professor of internal medicine at the Michigan Medical Center has been notified of his election to honorary fellowship in the American College of Surgeons by the organization's Board of Regents. Rarely conferred upon a specialist in internal medicine, Dr. JEROME W. CONN was recognized for his discovery, reported in 1955, of a new disease called "primary aldosteronism," a disorder also called "Conn's syndrome."

Nebraska

Ground-breaking ceremonies for the new addition to University Hospital, Unit III were held recently, marking the beginning of the first addition to the hospital since 1928. Located adjacent to and immediately west of the existing hospital, the project will be completed in the spring of 1960.

New York Medical College

Dr. RALPH E. SNYDER, dean, announced the appointment of Dr. SAMUEL A. THOMPSON as chief of the section of thoracic surgery. Dr. Thompson is credited with perfecting the cardiopexy, popularly known as the "talcum powder heart operation," which is performed on patients suffering from angina pectoris or coronary disease. Appointed to the staff in 1923 as instructor in surgery, he became associate professor of surgery in 1938 and will continue to fill this position.

New York University

The New York Cancer Research Institute has awarded the first Oliver E. Spencer Memorial Fellowship to NYU College of Medicine. The Fellowship will provide a one-year training and research scholarship to a physician specializing in cancer and selected by Dr. DONAL SHEEHAN, dean.

The first incumbent is Dr. ERLINDA TOBILLO NOVALES of Manila, The Philippines. Dr. Novales came to the U.S. for her residency training at New York City's Gouverneur Hospital and the New York Infirmary, where she is now chief resident in medicine.

Northwestern

The University of Brazil recently conferred the honorary degree of Doutor Honoris Causa upon Dr. JOHN A. D. COOPER in recognition of his work in helping to establish and equip a radioisotope laboratory in the Institute of Biophysics at the university's medical school. Professor of biochemistry and assistant dean of the school, Dr. Cooper gave the first course in radioisotope techniques in biology and medicine at the University of Brazil. This course furnished the basis of a continuing program for the education of physicians from Brazil and other South American countries on the use of radioactive materials. During the past summer, Dr. Cooper conducted a similar course at the University of Buenos Aires Faculty of Medicine.

An intensive review and report of new developments in arthritis will be held February 19–21, when Northwestern's Medical School, in cooperation with the Chicago Medical School, University of Chicago School of Medicine, University of Illinois College of Medicine and the Stritch School of Medicine, sponsors the first Chicago Post-Graduate Course in Arthritis and Related Conditions. The course is designed to aquaint physicians with the latest research work and methods of treatment of arthritis and related diseases. Other cooperating groups are the Illinois chapter of the Arthritis and Rheumatism foundation, the Chicago Orthopaedic society, and the Chicago Rheumatism society. To be held at Thorne Hall on Northwestern's Chicago campus, meetings will consist of lectures, informal panel sessions and luncheon discussions.

Oklahoma

New appointments to the faculty of the school of medicine include Dr. FLOYD S. CORNELISON, Jr. and Dr. DOMAN K. KEELE. Dr. Cornelison, former instructor in psychiatry at Boston University School of Medicine, has been appointed assistant professor of psychiatry, and Dr. Keele was named assistant professor of pediatrics. Dr. Keele was a Public Health Service research fellow in pediatric endocrinologic and metabolic diseases at Children's Hospital, Pittsburgh.

Seton Hall

Announcement has been made of the ap pointment of Dr. ROBERT P. NENNO as professor and director of the department of psychiatry. Dr. Nenno was formerly on the faculty at Georgetown University School of Medicine as assistant professor of psychiatry.

Stanford

Dedication ceremonies were held January 10, for Stanford's new $124,000 Biophysics Laboratory with Dr. Detlev W. Bronk as principal speaker. Dr. Bronk is president of the Rockefeller Institute for Medical Research and of the National Academy of Sciences. Dr. HENRY S. KAPLAN, who heads the new laboratory, was in charge of the program. He is also professor and head of the radiology department.

The new laboratory houses studies on X-ray microscope development, radiation physics, experimental electron therapy of cancer, cell physiology, and the biological role of free radicals.

U. of Washington

The department of physiology and biophysics has been awarded a $300,000 grant by the NIH to improve training opportunities for career scientists in this field. Payable over a five-year period, the training grant will enable the department to offer scholarships, including tuition and allowance for living expenses for persons wishing to take advance degrees or postdoctoral training in physiology.

Dean GEORGE W. AAGARD announced that according to a survey by the American Medical Association, the University of Washington School of Medicine now leads the nation in the number of students in allied professions taught by its medical faculty. Washington ranked second among the nation's 85 medical schools in the number of basic scientists receiving post-doctoral training, with 25 enrolled, he said.

Dr. ROBERT F. RUSHMER, professor of physiology and biophysics has been named winner of the Ida B. Gould Memorial Award for Research on Cardiovascular Problems. Announcement was made by Dr. Paul Dudley White at the annual meeting of the American Association for the Advancement of Science, in Washington, D.C. The award is given for "outstanding accomplishment in heart research."

Wayne State

The College has received a $30,000 gift from the National Foundation of Rochester (Mich.) to establish a professorship in medicine honoring William H. McGregor, founder of the National Twist Drill and Tool Company. Purpose of the gift is to make it possible for the College of Medicine to attract a distinguished scholar and outstanding teacher to its faculty.

Yale

Dr. JOHN F. FULTON, Sterling Professor of the History of Medicine, has been named recipient of an international award in the field of medicine and scholarship. The award is the George Sarton Medal of the History of Science Society, given annually for outstanding contributions in history of science. He will receive the Sarton Medal for 1958. The George Sarton Medal, made possible by the Chas. Pfizer Company, was created in honor of the noted Belgian scholar and professor of the history of science at Harvard. Dr. Sarton died in 1956.

PERSONNEL EXCHANGE

Faculty Vacancies

OPHTHALMOLOGIST: Full-time assistant or associate professorship available in Eastern university medical school. Excellent opportunity for young man interested in academic career. Ample facilities, support and time for research. No private practice required. Address: V-70.

SENIOR PATHOLOGIST: Three hundred forty bed general teaching hospital and large diagnostic clinic, located in the East. All departments adequately staffed by full-time board certified M.D.'s. and Ph.D.'s. Please give full summary of qualifications when answering. Apply to Administrator, Guthrie Clinic-Robert Packer Hospital, Sayre, Pa.

ANESTHESIOLOGIST: Board qualified, to be in charge of midwest university hospital service. Active general, thoracic, and cardiovascular surgical program. Ample research and teaching opportunity, attractive salary. Address: V-71.

PEDIATRICIAN: Full time clinical teacher for department with active student and house staff educational program. Person interested in clinical teaching as a career desired. Considerable small group teaching with less emphasis on lectures. Rank and salary dependent on qualifications. Address: V-72.

VIROLOGIST and IMMUNOLOGIST: Research position in medical school for young Ph.D. interested in immunology and virology to cooperate in a research program as well as to pursue individual interests. Salary depends upon qualifications and experience. Opportunity for teaching. Address: V-73.

PSYCHIATRIC SOCIAL WORKERS: Active participation in clinical teaching and in expanding program of services in the department of psychiatry and in pediatrics-psychiatry clinic in eastern university medical school. Excellent opportunity for individuals interested in social work contribution in medical education. Qualifications: Master's degree with psychiatric sequence, and for senior positions experience in supervision or teaching, preferably in psychiatric clinical setting. Send curriculum vitae with application. Address: V-74.

PHYSIOLOGIST OR PHARMACOLOGIST: Teaching and research position in medical school. N.Y.C. area. M.D. or Ph.D. required. Training in neurophysiology desired. Salary based on qualifications and experience. Address: V-75.

PROFESSOR OF PREVENTIVE MEDICINE: The University of Alberta invites applications for the position of professor and head of the department of preventive medicine in the faculty of medicine. Duties will include administration of the department, teaching of graduate and undergraduate students and a program of research. Salary will be $10,000 per annum with consulting privileges. Interested applicants should send a complete curriculum vitae, names of three referees, and a recent photograph to the office of the Dean of Medicine, University of Alberta, Edmonton, Alberta.

PEDIATRICIANS: Two or 3 part-time teaching positions —may use remainder of time for private practice. Address: F. G. Gillick, M.D., Creighton University School of Medicine, Omaha 2, Nebraska.

PSYCHIATRISTS: Full-time and part-time teaching positions. Need coordinator of teaching grant program. Would function under departmental director. Address: F. G. Gillick, M.D., Creighton University School of Medicine, Omaha 2, Nebraska.

OPHTHALMOLOGIST and OTOLARYNGOLOGIST: Interesting opportunity for part time association with an active teaching program. Address: V-76.

ASSISTANT PROFESSOR OF PREVENTIVE MEDICINE: Full-time appointment in department of preventive medicine with teaching and research opportunity, including comprehensive medical care teaching. Must have M.P.H. degree. Address: V-77.

FELLOW IN VIRUS RESEARCH: M.D., with at least one year of residency in pediatrics for training in diagnostic virology. Duties include approximately three hours of ward rounds, and five hours of training and research in the virus laboratory. The individual is expected to direct and consolidate activities in the clinical and research areas. Salary $6,000 per annum. Position available for 2-year tenure. Apply Dr. H. A. Wenner, University of Kansas Medical Center, Kansas City, Kansas.

IMMUNOCHEMIST OR BIOCHEMIST: Must be interested in field of infectious diseases. Activities include studies on immune mechanisms and on the biochemistry of virus infections. Full-time research position. Salary open; minimal $8,000. Apply H. A. Wenner, M.D., Section for Virus Research, University of Kansas School of Medicine, Kansas City, Kansas

To aid in solution of the problem of faculty vacancies, MEDICAL EDUCATION will list persons and positions available, as a free service. The school department or person may have the option of being identified in these columns or of being assigned a key number for each position listed. Mail addressed to key numbers will be forwarded to the person or department listing the request.

Information for these columns should reach the Personnel Exchange, Journal of Medical Education, 2530 Ridge Avenue, Evanston, Illinois, not later than the 10th of the month which precedes the month in which the listings will appear.

Personnel Available

EPIDEMIOLOGIST: Age 30, M.D., M.P.H., requirements completed for Dr. P.H. Experience in obstetrics, student medicine, health department and chronic disease research. Desires teaching and research position in medical school department of public health and preventive medicine. Research in many fields; publications. Address: A-369.

MICROBIOLOGIST: Ph.D. Training, experience and publications in bacterial physiology (nucleic acid synthesis) and immunology or immuno-chemistry (antibody formation); several years teaching experience of medical students, nurses and technicians. Desires medical school or other academic position in teaching and /or research. Address: A-370.

NUTRITIONIST-BIOCHEMIST: Ph.D. Physician. Eight years experience teaching medical and graduate students. Associate professor in leading Eastern university. Numerous publications and membership in leading professional societies. Desires medical school position where there is available a combination of pre-clinical and clinical teaching with research facilities. Principal interest and experience in nutritional biochemistry and metabolism. Address: A-371.

PEDIATRICIAN-PSYCHIATRIC ORIENTATION: Age 34, certified, F.A.A.P. Five years of private practice. Desires academic position with opportunities for research in psychosomatic aspects of pediatrics. Available July 1959. Address: A-373.

ANATOMIST: Age 35, married. Desires change of position with more time for research, in Canada or U.S. Medical graduate of London Medical School and the English Royal Colleges. Also a London Ph.D. Has had extensive medical experience and surgical training before becoming an anatomist. Since then lectureship in a London school and Senior Lectureship and Readership for six years in a British overseas university. Has had responsibility for teaching, planning and administration. Publications in journals. Address: A-374.

ALLERGIST: Board eligible in medicine. Desires career type opportunity in teaching and research. Has basic training in immunology. Will consider full-time, geographic full-time and half-time opportunities. Address: A-375.

INTERNIST-BIOCHEMIST: Ph.D., M.D. Age 42. Desires opportunity to do research with some clinical work, interested in rheumatic diseases experienced teacher and investigator. Wide scientific background, including radioisotopes, publications. Address: A-376.

ROTATING INTERN: Age 26. Publication co-author. Desires faculty appointment in general surgery. Excellent references. Available July 1959. Address: A-377.

PEDIATRICIAN: Diplomate American Board of Pediatrics. Currently assistant professor; seeking a teaching position in a new location. Address: A-378.

ORTHOPEDIC SURGEON: British, age 36. F.R.C.S. (Edin.) F.R.C.S. (Eng.) Guy's Hospital Medical School, London. Publications, British Medical Journal. Eight years experience. Desires position in American medical school, preferably in orthopedic and traumatic surgery. Prepared to sit any necessary licensure or other examinations. Prefers settling in a maritime state with a warm climate. Address: A-379.

MICROSCOPIC ANATOMIST: M.D., male. Presently associate professor but desires change of locale to upper midwest or west for reasons of health. Seeking academic or research position in medical center or research laboratory. Address: A-380.

PHYSIOLOGIST: Ph.D., 1958, married, three children. Research in circulatory and respiratory physiology. Nine publications; teaching experience with medical and dental students. Desires teaching appointment in New England or New York State, with opportunity for research. Address: A-381.

INTERNIST: M.D., age 33. Currently on faculty of eastern medical school with experience in private practice and industrial medicine; eight months experience and training in psychiatry. Desires faculty appointment with opportunity for clinical investigation in cardio-vascular diseases in teaching hospital. Address: A-382.

INTERNIST: Female, age 32; Mayo trained with an interest in hematology. Desires teaching position. Address: A-383.

SURGEON: Age 33, certified general, experience in thoracic and extra-corporeal techniques. University training. Seeks full-time academic position with opportunity for research. Address: A-384.

BIOSTATISTICIAN: Seeking position as member of team in basic medical research or as lecturer to medical, dental, pharmacy and graduate students. Address: A-385.

PEDIATRICIAN: MPH, desires teaching and /or research position with clinical emphasis. Address: A-386.

ANATOMIST: Position wanted in university anatomy department in U.S., by married male with family. British medical school degree in medicine, extensive clinical experience, and recent teaching and research experience in anatomy in England. Good references available. Available to attend interviews in the U.S. now. Address: A-387.

OPHTHALMOLOGIST: Research scientist in field of vision and ophthalmology desires teaching position in Canada or U.S. Long experience in field and extensive publications. Contracts pending and in hand. Address: A-388.

OBSTETRICIAN-GYNECOLOGIST: Foreign physician, age 30, three years residency in Obstetrics and gynecology in teaching hospitals of U.S.A., with good command of English, desires position as preceptor in Ob-Gyn., starting July 1959. Address: A-389.

UROLOGIST: Foreign physician, age 30, one year internship, three years in urology and one in urological research in teaching hospitals of U.S.A. desires position as preceptor in urology, starting July 1959. Good command of English. Address: A-390.

THORACIC SURGEON: M.D. 1947, University of Istanbul. Served an internship in surgery (1954–55) Montana Deaconess Hospital, Great Falls, Montana. Served as Fellow in Thoracic Surgery (sponsored by American College of Chest Physicians) Knoxville, Tenn. Presently in charge of thoracic surgery department at Armenian Hospital, Istanbul. Desires teaching position in American medical School. Address: A-391.

PATHOLOGIST: Age 35, married. Certified PA 1955. Academic background and three years teaching experience. Wishes to relocate in West. Will consider part-time or full-time teaching appointment. Especially interested in surgical pathology. Address: A-392.

OTOLARYNGOLOGIST and HEAD and NECK SURGEON: Age 32; board eligible. University of the Philippines graduate. Completed five and one half years' training in eastern medical centers (3 years otolaryngology, 6 months more bronchoesophagology, and 2 years general and head and neck surgery). Desires one year fellowship, or assistantship, or academic position. Available August or October, 1959. Address: A-393.

BIOCHEMIST: Ph.D., age 30. Assistant professor of biochemistry desires academic position. Five years medical and graduate teaching experience. Membership in national societies, honors, grants, graduate students. Fifteen full-length publications. Research interests: enzymology, microbial metabolism and protein metabolism. Available July 1, 1959. Address: A-394.

PHYSIOLOGIST-PHARMACOLOGIST: Ph.D., 1954. Male, married, with family. Presently teaching physiology in dental school. Desires teaching position with research opportunities in physiology or pharmacology department. Address: A-395.

BIOSTATISTICIAN: Age 43; Ph.D. (mathematics and statistics). One year post-doctoral work in statistics; sixteen years experience in teaching and research in schools of medicine and public health. Desires position doing teaching and/or research. Address: A-396.

PATHOLOGIST-BACTERIOLOGIST: M.B., B.S. (London University); M.R.C.S. (England) L.R.C.P. (London). Age 42, family; registered with British General Medical Council. Five years experience in general and clinical pathology and bacteriology, London, England. Completing 3-year contract in Jamaica. Desires academic appointment in U.S., preferably in the South. Available May, 1959. Address: A-397.

VIROLOGIST-PATHOLOGIST: Excellent experience and background in infectious diseases, human and animal viruses. Broad interests include cancer and pathogenesis. D.V.M.–Ph.D., age 34. Presently in industry. Desires research and teaching position. Would consider Senior Fellowship. Address: A-398.

INDEX TO ADVERTISERS

PUBLICATIONS

Useful information for both medical educators and students is published by the Association of American Medical Colleges. These publications may be obtained from the Association headquarters office, 2530 Ridge Avenue, Evanston, Ill.

Booklets

Medical Education Today ($1.50).

Admission Requirements of American Medical Colleges—1958–59 ($2.00).

Fellowships, Funds and Prizes Available for Graduate Medical Work in the U.S. and Canada—4th edition, published 1954 ($1.50).

By-Laws of the Association of American Medical Colleges (Revised 1955).

Minutes of the Proceedings of the Annual Meetings (1953–57 Minutes now available).

Public Understanding and Support of Medical Education.

History of the Association of American Medical Colleges—1876–1956

The Journal of MEDICAL EDUCATION

A monthly journal devoted exclusively to medical education.
Subscription rates: $7 per year, $13.50 two years, $19.50 three years. Foreign $8 per year, $15.50 two years, $22.50 three years. Pan America and Canada $7.50 per year, $14.50 two years, $21.00 three years. Single copies $1.00.

Journal supplements available:

The National Health Service of Great Britain ($1.00).
Education of Physicians for Industry ($2.00).
Support of Research by American Cancer Society ($1.00).
Survey of Women Physicians graduating from Medical School 1925–40 ($1.00).
Suggestions for Supplementing the Medical Curriculum in Time of National Emergency.
Medical Education for Foreign Scholars in the Medical Sciences ($1.50).
A Study of Medical College Costs $(1.50)
El Estudiante de Medicina ($1.00)

Teaching Institute Reports ($2.00 paperbound, $3.00 clothbound).

Report of the Conference on Preventive Medicine in Medical Schools (Report of the 1952 Institute).

The Teaching of Physiology, Biochemistry and Pharmacology (Report of the 1953 Institute).

The Teaching of Pathology, Microbiology, Immunology and Genetics (Report of the 1954 Institute).

The Teaching of Anatomy and Anthropology in Medical Education (Report of the 1955 Teaching Institute).

The Appraisal of Applicants to Medical School (Report of the 1956 Institute).

The Ecology of the Medical Student (Report of the 1957 Institute).

Medical Audio-Visual Institute Publications

Film Catalog, Fall 1955 and Supplements.

Reprints from the Audiovisual News Section of the Journal of MEDICAL EDUCATION.

Films in Psychiatry, Psychology and Mental Health (available from the Health Education Council, 92 Belmont Drive, Livingston, N.J.).

Films in the Cardiovascular Diseases (Part I available from the American Heart Assn.), 44 E. 23rd St., New York 10, N.Y. ($2.00).
Part II available from the Medical A-V Institute ($2.00).

Publications of Related Organizations

Hospitals Participating in the Matching Program 1958 (NIMP).

Results of the Matching Program 1958 (NIMP publication).

The Student and the Matching Program 1958 (NIMP publication).

Medical College Admission Test—Bulletin of Information 1958 (Educational Testing Service publication).

Psychiatry in Medical Education—1951 Conference ($1.00).

The Psychiatrist: His Teaching and Development—1952 Conference ($2.50).

(The above can be obtained from: American Psychiatric Assn., 1785 Massachusetts Avenue, NW, Washington, D.C.).

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Mark ... *age 3 days*

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Sandra ... *age 2 months*

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